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BALTIMORE, MARCH 29, 1895.

THE business men of West Virginia occupy twenty-four pages of the MANUFACTURERS' RECORD this week, showing the resources of their country. Gentlemen of Polk county, a little of this same spirit would help move this country out of the woods.—The News, Columbus, N. C.

It would be hard to find a region surpassing Polk county for climate, scenery and healthfulness, as well as for many other attractions, but the world at large knows nothing about the place. The South has not yet learned the value of publicity like the West has.

THE MANUFACTURERS' RECORD publishes two letters today relating to the controversy about \$5 iron. We regret that instead of this controversy having been confined strictly to a scientific discussion of the matter, it was unfortunately turned into personal criticisms which should have had no place in it. The MANUFACTURERS' RECORD admits its own error, through inadvertence, in not having insisted upon an exclusion from "Southern Iron's" first letter of a personal criticism of Professor Procter and Mr. John Fulton. If there is to be any more discussion of the subject, it must be purely upon the merits of the case as to whether iron can be made for \$5 or not, and not upon personalities.

TREASURER SANFORD, of the Globe Mills, Fall River, Mass., in an interview says:

We need among other things a national law controlling the hours of labor. Public sentiment should be educated in this direction, so that the laboring and manufacturing industries throughout the several States should be controlled by our national government. As is apparent to all, this is the chief solution of the whole problem of competition between different sections of our country.

This is a very generous proposition on the part of our New England friends. We have not the slightest doubt that they would be heartily glad to see such a law in existence, hoping that it would save them from the South's competition, but in the first place, such a law will not be passed for some years to come, if ever, and in the next place, the South's advantages do not rest simply upon labor. There are a great many other advantages of even more value on the South's side.

What the South Has Done.

The Telegram, of Worcester, Mass., in discussing the South, says:

The movement of the Northern agriculturists toward the South is a most encouraging sign. Certain sections of the South are much more promising for the agriculturist than the West. If the Northern agriculturist can retain his energy and vigor in the Southern climate or a percentage of it, sections that are now but little better than a barren waste through lack of intelligent cultivation should be made to blossom like the rose. The agriculturists of the South are in the main an ignorant, shiftless set, too poor to buy implements for the proper cultivation of a soil that needs but little tilling in comparison to that of New England.

The question of Southern climate has been so completely covered that any discussion on that point of the Telegram's article is a waste of time. If the Telegram will study the United States census returns, and then if its editor will have the good sense to spend a summer in the South, he will never raise that question again.

THE MANUFACTURERS' RECORD admits that "proper cultivation" is needed on many Southern farms, and that there are some "ignorant, shiftless" farmers in the South; but, on the other hand, it invites attention to a few statistics compiled by the United States census. Before presenting these figures, however, it may be well to say that the Southern farmer, lacking a home market because of the small urban population, has been at a great disadvantage compared with farmers of other sections, where vast industrial interests have created a home market for much of their products. However, Southern farmers, even if some of them are "ignorant, shiftless," have done reasonably well, all things considered. The census reports show that, starting in 1880 with total farm assets, which includes the value of farms, implements, etc., of \$2,314,000,000, the South made an advance by 1890 to \$3,182,000,000, a gain of 37 per cent. During the same period the increase in all other States and Territories was from \$9,790,000,000 to \$12,797,000,000, or 30 per cent. In studying these figures it should be remembered that the South had little or no immigration to help to swell the volume of its agricultural products, while other sections had the benefit of a large proportion of the 5,000,000 foreigners who landed here during the decade, the number that settled on Western farms probably being a large majority of the total.

The total value of farm products of the South in 1880 was \$666,000,000, against \$1,550,000,000 for the remainder of the country. In 1890 the South produced \$773,000,000, a gain of \$107,000,000, or 16 per cent., while the gain in the rest of the country was only \$141,000,000, or 9 per cent. With just one-fourth as much total assets in farm operations as the balance of the country, the South had \$107,000,000 increase in production out of a total of \$248,000,000, or nearly one-half.

The South had \$3,182,000,000 invested in farm interests in 1890, and the total productions were \$773,000,000, or a gross revenue of 24.1 per cent. on the capital. All other sections combined had \$12,797,000,000 in farm operations, and the product was \$1,687,000,000, or 13.1 per cent. gross revenue, only a fraction more than one-half as much in percentage of production as the South's. Thus, with only one-fourth as much capital invested in agriculture, the South had nearly one-half as much aggregate products. Somehow the "ignorant, shiftless" farmers seem to have held up their end pretty well as compared with the "energy and vigor of the Northern agriculturist." It is impossible to get at the net profits, but the foregoing figures show how far ahead the South is in the gross product, based on the capital invested. They show that for every dollar received by Northern farmers on the capital invested, Southern farmers received nearly \$2. But this is not the only strong point of the case. The intensely cold winters of the North make outdoor work impossible for several months every year; they add largely to the cost of keeping live-stock, and to family expenses for fuel and heavy clothing. The mild weather of the South enables the farmer to work twelve months in the year; it reduces the cost of live-stock raising to the minimum, as cattle can find good grazing for a large part of the year; it makes the fuel bill for farmers an inconsiderable item, and it obviates the necessity of heavy clothing and many other expenses absolutely necessary in all cold countries. Thus the Southern farmer's capital not only yields to him \$2 for every dollar returned to the Western farmer by his capital, but, added to this, there is a difference in the cost of living which is so great that it must command wide attention as it becomes more fully understood.

The South only needs more industrial centres, more and larger cities, to stimulate a little wider diversity of agriculture, and, by creating a home market for all the products of farming, to insure such agricultural progress even by these so-called "ignorant, shiftless" farmers as our New England friends never dreamed of. And then, when we add to what the Southern farmers are doing—and the MANUFACTURERS' RECORD freely admits that there is great room for improvement in methods of cultivation—the work of the thousands of Western and New England farmers now settling in the South, and to all of this the prosperity which increased manufacturing interests and a home market will bring, what a wonderful record of progress the next few years will show.

In a letter to the Roanoke Times Mr. N. B. Johnston urges that all Southern railroads should adopt as a settled

policy the purchase of engines and locomotives from Southern shops. Mr. Johnston claims that the great drain of money out of the South to purchase materials of this kind has been one of its most serious drawbacks, and that Southern railroads can materially help to develop the towns and cities along their lines by purchasing at home all they need, even if they should have to pay a somewhat higher price. In the end the result would be to the profit of the roads by the upbuilding of the country.

A Strong Combination.

A prominent Northern business man, in a letter to the MANUFACTURERS' RECORD, in referring to the enthusiasm with which the people of Rockingham county, Va., have taken hold of the effort to secure increased railroad facilities, says:

I know of no other county in the United States where the local people seem to be starting the ball rolling with more vigor than they are in Rockingham county, Va. They are determined to capture prosperity, or else to create some themselves.

This is only another illustration of what the MANUFACTURERS' RECORD has persistently claimed—that every effort made by Southern people to develop their own resources and build railroads or manufacturing enterprises immediately commands the attention of outside people. Self-help not only results in stimulating the local people, and thus showing them how much they can do for themselves, but it draws to their aid co-operative work of outsiders. It is the self-helping community which is not only ready to put its own shoulder to the wheel, but at the same time to press the advantages and attractions of its locality upon the attention of the world, that will take a leading place in the new period of Southern advancement. It was a combination of pluck and self-helping spirit, added to tireless energy in working for outside capital, that made possible the creation of such Western cities as Minneapolis, St. Paul, Denver and Chicago. The two things must go hand in hand, and the Southern town that hopes for a prosperous future must first turn its own hands to the work, put up its own money, start the ball rolling, and then it will have something to tell to the outside world about what it is doing and why the outside world should invest its money there. With this combination in full play throughout the South there will come industrial activity commensurate with the unequalled advantages of this favored land.

In a letter to the MANUFACTURERS' RECORD Messrs. John L. Williams & Sons, bankers, of Richmond, say:

The time is not far off when the isthmian barrier shall give way, the gate to the Pacific and all the East be opened and our section be approved as the very garden of the world, and the wealth and glory of the Mediterranean pale before the amazing grandeur of the Caribbean and the Gulf, and our ports surpass all that have embellished history.

Another Falsehood Against the South.

The Boston Journal claims that blackmail for political purposes is levied upon manufacturing enterprises established in the South by outside people. The Inter-Ocean, of Chicago, has a telegram from Washington to the same effect, both papers evidently getting their statements from the same source. The dispatch in the Inter-Ocean says:

In some localities at least the Northern proprietors of cotton mills established in the South, which have received exemption from taxation as an inducement to locate there, are visited as frequently as national or congressional elections occur by a committee of the local citizens who serve some politicians and who do no work (a sort of bulldozing agricultural Tammany), with the suggestion that contributions be made by them to the democratic campaign fund, with the added threat that if the contribution shall not be forthcoming local legislation hostile to the interests in which the Northern capitalists are engaged may be expected. These demands are not infrequent. Evidences of political blackmailing of this kind are common occurrences in the South. The Northern democrat and mugwump capitalist may be happy in the South, but the Northern republican capitalist finds in many places that he is compelled to submit to the political supervision which is tyrannical and destructive to personal liberty.

These sweeping assertions, put forth without the shadow of proof, must be substantiated by the Journal and the Inter-Ocean, or else they must stand convicted before the public of willful misrepresentation of the South, done wholly to counteract the southward tendency of investments. As to the statement that Northern republican capitalists have to submit to tyrannical political supervision, this is emphatically false, and the MANUFACTURERS' RECORD believes that the other statements are equally as false. If it be true that the political scoundrels which are found in all sections and in all parties are able to levy blackmail upon industrial interests in the South, it simply shows that the managers of these industries must be very weak men to submit to it. If there is any community in the world that is more completely controlled by politicians than Boston, the MANUFACTURERS' RECORD has failed to hear of it. If the statements of the leading manufacturers of Massachusetts are true, then every session of the Massachusetts legislature is looked forward to with dread, because of the assurance that the public has, by sad experience, that its chief business will be to devise schemes to either destroy the manufacturing interests of the State, or else to necessitate vigorous opposition on the part of the manufacturers, thus furnishing a wide margin for an opportunity of levying blackmail. Before Chicago and Boston attempt to criticize the South on this point it would be well for them to see some of the faults of their own politicians.

Making Tinplate.

Several years ago, when the McKinley bill was under discussion, the MANUFACTURERS' RECORD insisted that with a fair degree of protection the manufacture of tinplate would become an important industry in this country. Our free-trade friends ridiculed such statements. They said we had no tin, and hence could make no tinplate, ignoring the fact that Wales imports much of its tin from the East. For months after the tariff bill was passed they ridiculed every announcement of new tinplate works. That was only three or four years ago; now, as shown elsewhere in

this issue, we have thirty four tinplate works with an aggregate capital of about \$8,500,000 either completed or under construction. These works will employ from 11,000 to 12,000 hands and pay out in wages about \$7,000,000 a year.

Will the South Meet It?

The American Land and Title Register says:

The question of securing desirable immigrants for the Northwest is an important one, and the Minneapolis Times has decided on a novel scheme, and at the same time one which will bear fruit in the number of people that will be brought to this country. An immense edition of 100,000 papers is to be issued early this spring, in which the resources of the Northwest will be shown in an accurate and comprehensive manner. Over 100 specialists will contribute, and the entire edition is to be distributed gratuitously. It will be shipped to England, and from Liverpool or some other central point be distributed through the mails to rate-paying tenant-farmers having some means, and who will bring experience and a sturdy industrious method to this country.

This is only one of many illustrations showing the determination of the people of the Northwest to make the greatest effort of their lives to attract immigration. Even Nebraska is stirring itself tremendously to draw people to the State, and it is claimed that a good many are going, notwithstanding its droughts and severe winters. The southward tendency of men and money only serves to arouse the energy of the Northwest to heroic efforts to stem the tide. It behooves the railroads, the towns, the counties and the States, and in fact every corporation and every individual interested in the South, to put forth a supreme effort to command the world's attention to the South's advantages. Instead of saying that they cannot afford to spend money for this purpose, they should realize that they cannot afford not to spend it. Immigration means more and better schools, more churches, better roads, more prosperous towns and cities, more opportunities for money-making and for the enjoyment of the comforts of civilization, and greater agricultural prosperity. The time has come when the whole South should bend every energy to the work of attracting settlers.

Discredited at Home.

Hon. T. Jefferson Coolidge, a practical cotton manufacturer, says:

I hardly believe that Senator Darling has made a report on the recent Southern trip of his committee which investigated the Southern cotton movement. If he has, and if the report is similar to the interviews with himself, it shows the uselessness of sending committees off on junketing tours. A fact that speaks for itself is that at the present time between 300,000 and 400,000 spindles are going up in the South and not a spindle in Massachusetts. Senator Darling has evidently been to the poorer Southern districts. If he had gone to the Piedmont region, which runs for 1000 miles on the foothills of the Alleghenies, through the Carolinas, Georgia and Alabama, he would have seen large mills with new machinery. One mill of 50,000 spindles is increasing to 100,000 spindles. In this region both labor and coal are cheap.

This is just what the MANUFACTURERS' RECORD predicted. The practical cotton manufacturers of Massachusetts deny the theories of their impracticable legislative committee, and in doing so are stirring all New England up as to the South's advantages for cotton mills.

THE Massachusetts legislative investigating committee is quoted as saying:

The greatest number of spindles we saw or heard of in one mill was 16,000, which seems insignificant compared with 100,000 spindles in a single mill at Fall River.

If correctly quoted, the committee

writes itself down as composed of dunces too stupid to have examined any textile directory or to have read the papers of its own State.

The Usual Result.

Hon. R. T. Vincent, mayor of Shreveport, La., in a letter to the MANUFACTURERS' RECORD says:

Since the MANUFACTURERS' RECORD has been more generally read in our city there has been a lively interest manifested by our people towards the erection of a cotton mill. I have recently inaugurated a movement to that end in a small way by preparing to start one on the co operative plan with a capital stock of \$50,000.

Thus the good work of the MANUFACTURERS' RECORD is not simply confined to drawing outside men and money to the South, but is equally efficacious in stirring up Southern people to the development of their own resources.

English Spinners Ought to Come South.

The Textile Mercury, one of the leading textile journals of Great Britain, takes a rather gloomy view of the future of cotton manufacturing in that country. In a recent issue it says:

It is high time the English cotton spinner and manufacturer should look out for suitable fields to which he may emigrate, for it seems to be daily becoming more evident that his day is over in this country.

ELSEWHERE in this issue may be found a letter from Hon. J. H. Walker, M. C., of Massachusetts, which was called out by the communication from Mr. John Henry Keene, Jr., published in the MANUFACTURERS' RECORD of March 22 under the headline "Financial Views of a Leading Lawyer." While the questions discussed in these letters are, as Congressman Walker says, "of vital interest, especially to the South," they cover controversial subjects that require much greater space for their discussion than the MANUFACTURERS' RECORD can afford to give them. Its legitimate field is the collection and presentation of all facts and statistics that may directly or indirectly affect the progress of the South, point out to its people new lines of profitable development, and induce desirable immigration and the investment of outside capital. Incidental to this broad field are such great questions as the construction of the isthmian canal, the development and diversification of the South's manufacturing industries, the increase of its commerce, both interstate and foreign; questions of national importance in which the South has a vital interest. On all these questions the MANUFACTURERS' RECORD presents facts as the best of arguments, leaving to other publications which have more space to devote to them the controversies to which such presentations of facts often give rise.

A DISPATCH from Bristol, Tenn., claims that the Embreeville furnace property, of Embreeville, which was recently purchased by the foreign bondholders, will shortly be afforded better railroad facilities by the building of a five mile line between Erwin and Embreeville. This would give the furnace an outlet other than by way of the Southern Railway Co. The new route as reported would be through Erwin and over the Three Cs to Johnson City, thence over the Bristol, Elizabethton & North Carolina road to Bristol, making connection with the Norfolk & Western. The same statement claims that the Rothschilds are interested in this property, but this is doubtless incorrect.

New Industries for Three Months.

The summary of new industries reported during the last three months in the MANUFACTURERS' RECORD shows that there has been a very decided increase as compared with the corresponding period of 1894. For the first quarter of 1895 the new manufacturing and mining enterprises reported in our Construction Department, including those that have been incorporated and actually undertaken, and excluding all that are simply talked of or projected, shows an aggregate of 891, against 662 for the first three months of 1894, an increase of 229, or a gain of over one-third.

Examining the detailed report as given below, it will be seen that this increase was very general, although in one or two cases there was a decrease. The largest increase is shown in cotton mills, of which forty-two were organized during the last three months, against nine for the same period of 1894; of miscellaneous enterprises there were 455 against 293, mining and quarrying companies increased from fifty for the first three months of last year to sixty-two, flour mills from twenty-four to thirty-seven, cotton compresses from one to seven, ice factories from twenty to twenty-five, electric-light plants from twenty-four to thirty, water works from twenty-four to twenty-eight, while in machine shops and foundries and in canning factories there was a decrease.

For the last quarter of 1894 the total number of enterprises reported was 774, showing that the first three months of this year leads not only over the corresponding period of 1894, but over the last quarter of 1894. The following list shows the new enterprises in detail:

Description of Industries.	First Quarter 1894.	First Quarter 1895.
Iron furnaces.....
Machine shops and foundries.....	31	23
Stove foundries.....	1
Miscellaneous iron and steel works.....	12	12
Woodworking establishments, which include saw mills, planing mills, etc.....	122	122
Furniture factories.....	4	5
Carriage and wagon factories.....	4	4
Agricultural-implement factories.....	3	5
Mining and quarrying companies.....	50	62
Flour mills.....	24	37
Textile mills.....	9	42
Cotton compresses.....	1	7
Cottonseed-oil mills.....
Brick works.....	11	12
Canning factories.....	27	18
Ice factories.....	20	25
Electric-light and power plants.....	24	30
Gas works.....	3	3
Water works.....	24	28
Miscellaneous not in above.....	293	455
Total.....	662	891

Rapid Growth of Tinplate-Making.

THE TINNED PLATE MANUFACTURERS' ASSOCIATION OF THE UNITED STATES, PITTSBURG, PA., March 19.

Editor Manufacturers' Record:

In reply to your favor of the 16th inst.:

We have now in this country, completed and in course of construction, thirty-four tinplate works. These works have a total of 177 hot-finishing mills, all of which will be completed and in operation by the month of June next.

The capacity of these mills will exceed an annual production of 260,000 tons of finished product, and will furnish employment to 11,000 or 12,000 hands.

The capital invested, as near as I can estimate from the returns already submitted, is about \$8,500,000, and wages paid about \$7,000,000 a year.

You will, of course, perceive that these figures are based on the 177 mills being operated fairly up to their capacity, and pertains only to the manipulation of reducing the billet in some cases, but the bar in most cases, to finished product. You will readily understand that the amount of labor from the ore to the billet and bar is very extensive, but is not included in the figures I have submitted above.

In looking over the returns we have at hand I find that there are 108 finishing mills completed and in operation at the

present time. These, as you will perceive, have a capacity of a little over 160 000 tons of finished product per annum, give employment to 7000 or 8000 hands, capital invested about \$5,500,000 and wages paid about \$4,500,000 if the mills are operated full time, that is to say, about forty-five weeks in the year.

When we remember that less than four years ago no tinplates were made in this country, the marvelous growth of the industry is certainly phenomenal. No other manufacturing industry, so far as I have been able to discover, has ever made such progress in the same period of time.

The capacity of a mill, by which we mean its operation for forty-five weeks in a year, is 30,000 boxes. By a box we mean a hundredweight, or 112 pounds.

JOHN JARRETT, Secty. and Treas.

Congressman Walker on Financial Matters.

WORCESTER, MASS., March 23.

Editor *Manufacturers' Record*:

I notice in this week's *MANUFACTURERS' RECORD* an article signed John Henry Keene, Jr., concerning the New Orleans riot, and also some observations on the money question, both of which are of vital interest, and especially to the South. It costs less to transport goods from any European port to any point between the Atlantic coast and the Alleghany mountains than to bring goods or products from any point forty miles west of the Alleghany mountains to points east of the Alleghany mountains. Thus free trade would surrender the market of the whole Atlantic slope to Europeans, and the nearer any tariff comes to free trade, from the points of equalling the difference in cost of wages in any product, does it tend to surrender the Atlantic slope to European producers. Furthermore, markets are in "wages," not in numbers of people, and the high wages paid in this country make the best market in the world in this country, and equivalent to one-half the remaining 1,400,000,000 in the world, or 700,000,000.

The monetary condition of this country very seriously aggravates the situation, but the primal cause of distress is the stagnation of all enterprise, caused by the proposed and accomplished tariff legislation of the Fifty-third Congress. It really has decreased this market by one-third or more in reducing wages and throwing out of employment a large proportion of the 23,000,000 engaged in gainful industry, and thus stopping their power to buy and consume products.

One great thing that hinders the investment of capital at the South, and thus the establishment of manufacturing industries, is the little regard there paid to law. In the Boston Journal of this morning I see it stated that in many sections of the South, where manufacturers have been released from State and county taxation to induce them to build factories in the South, the political bosses of the South visit those factories and compel them to contribute a larger sum to the party funds than the taxes paid on the same value of property by citizens in the neighborhood of the mills. Instead of the movement of the last few years to invest Northern capital at the South continuing and increasing, rest assured it will be seriously checked or wholly stopped if mob violence is not suppressed. Northern capitalists must be little short of insane to continue to invest capital in States or neighborhoods where mob-law rule or blackmail is allowed.

The writer is entirely mistaken about capital being hoarded. The value of capital is destroyed when hoarded. Every effort is made by capitalists to invest their capital, and they only fail to do so through timidity, and thus mob violence absolutely stops its investment and destroys its value.

Again, the monetary policy of this coun-

try is not "dictated by the few," but by the many. It is because a large majority of the 70,000,000 are determined to commit hari-kari as to monetary matters that our monetary system is disordered, and it is true that the minority are trying to prevent self-destruction by the majority. The financial system of nearly every country in the world has at some time been disorganized by the debtor class in their supposed interest, only to find that they had fatally injured themselves. Anything that tends to instability, to fear, to extravagance and high prices, as cheap money always does, is fatal to the masses of the people. The conservatism of the creditor class in every country under such circumstances, and they only, have saved the debtor class from self-destruction, and have restored the country to prosperity; and even admitting the fact that in the year 1 there was \$1,800,000,000 of money in the Roman Empire, and in the year 1500 only \$200,000,000 in the same territory, it is only evidence of the darkness of those ages preventing the existence of money, and has nothing to do with the question at issue today.

Money has been constantly increasing per capita from 1800 to the present moment in this country and every other, and proportionately faster than trade has increased its demands upon it, and therefore its volume could have little or nothing to do with the commercial crisis of recent years. To say the larger the volume of money the less its purchasing power, is to make a statement the exact opposite of that usually made by monetary doctrinaires and to the facts in the case.

A grain of gold is the ultimate measure of value of every product subject to commerce in the known world today, and has been for more than seventy years. In all silver-measure-of-value countries the purchasing power of any silver coin of any product is the commercial value of the bullion in it, measured in grains of gold. This fact is incontestably true. It is a fact, as the gentleman states, that "governments have nothing to do with the intrinsic value of bullion," and, contrary to his statement, they haven't the slightest control over the world's value in the world's market and price level of product over coin made of the bullion.

An uncoined piece of silver the weight of a dollar in Mexico will buy exactly the same volume of products that a Mexican coined dollar will buy. It is so in every silver-measure-of-value country. As an uncoined piece of gold weighing the same as an American gold eagle will buy as much as the American gold eagle of any product, and that is true of every country on a gold measure-of-value basis, it is also true that a gold American eagle will buy as much weight of coined silver in every "silver-measure-of-value country" of the world as it will buy of silver bullion, and as much of the product of every country in the world as the silver coin will buy that the gold eagle will buy.

To say "exit the money-changers" may foster and intensify prejudice, but it is not argument. It adds nothing to the sum of known facts, and really means the violation of all existing contracts and the upsetting of all values of products with reference to each other. All economists admit that all trade is "the exchanging of product for product," and only seemingly, not really, for money. What the South wants, as does the North, is absolute stability, without the slightest fear of change of the existing measure of value between man and man, under which every existing obligation was contracted and every existing price was made.

The production of cotton and of all grains has been more than one-half as much again per head in the last three or four years as in the twenty years preceding, and the production of all natural products has increased the world over out of all proportion to the

increase of wages, which only enable people to buy and consume them, which is why prices are so low the world over. The only remedy is to increase the power of the people to consume products as fast as products are increased. J. H. WALKER.

THE BALTIMORE EXPOSITION

And Its Relation to the Progress of the South.

[From Baltimore Daily News.]

In an interview in regard to the value of the Centennial Exposition to Baltimore, Mr. R. H. Edmonds, editor of the *MANUFACTURERS' RECORD* says:

"I very seriously doubt whether the value of the exposition is fully appreciated by all of our own people as yet. Never having had an exposition in Baltimore, it is more difficult for us to understand its effect upon the progress of a city than it is in such places as Atlanta, where the value of expositions in aiding the progress of a city has been often demonstrated. Notwithstanding the rapid industrial progress of this city, which has increased its manufacturing capital from \$38,000,000 in 1880 to nearly \$120,000,000 at present, and notwithstanding the fact that, as shown by census reports, we have over 100,000 hands employed in factories, Baltimore is really just beginning its era of industrial growth.

"We will not simply have thousands and hundreds of thousands of sightseers who will come here on account of the exposition, but we will have visitors from practically the entire business interests of the whole South. On the other hand, thousands of leading Northern manufacturers and capitalists seeking to know more about the South will come to Baltimore to study the mineral and timber exhibits of the Southern States. It is an assured fact that many thousand Northern visitors will be at the Atlanta Exposition this fall wholly for the purpose of studying the South. I have within the last few days heard of about a dozen of the leading bankers of Boston who have decided to go to Atlanta purely for this reason. The Atlanta Exposition will help to awaken the country in regard to the advantages and attractions of the South as a place for manufacturing and for the investment of Northern capital, and by 1897 this spirit of Southern investment will be so ripe in the North and West that we can count upon the attendance of some one from nearly every leading iron, steel and machinery-making concern and every textile mill in America, and very many from the leading concerns in Europe, not simply as sightseers, but as careful investigators with the view to making investments. These people will be in addition to the great crowds that will come purely as sightseers.

"The Baltimore Exposition will typify the industrial capabilities of the Southern States, and in that respect will be an object-lesson for the world.

"If we would rightly understand Baltimore's position in regard to this exposition and in regard to the South, we must have an adequate appreciation of the South's advantages and its future.

"The vast wealth of Boston, a city which, by the way, has more national banking capital than New York itself, is due mainly to the enormous manufacturing interests of New England. As New England has grown in wealth, its financial and business interests have centred in Boston, creating the prosperity of that city. What New England has been to Boston the South will be to Baltimore, but increased many fold. New England is a barren country with a purely artificial development. It has neither coal nor iron of any importance, nor cotton, and comparatively little standing timber. It imports its foodstuffs and its raw materials for manufacturing from other sections, and even under these adverse conditions has

built up its enormous wealth. For the last five or ten years the industrial interests of the world have been undergoing a change, and manufactures have been gradually tending toward the source of the raw material. With declining prices and decreasing margin of profit that country or that section of country which can produce and distribute at the lowest cost must necessarily become the controlling factor in manufacturing.

"There is no other country in the world having the combined advantages of the South. There is no other country which has coal and iron and timber and cotton in the same abundance and with equal facility for utilization. Pennsylvania's wealth has been created mainly out of coal and iron, and the magnitude of its wealth can best be appreciated by the simple statement that the last census report shows that that one State, which is 6000 square miles smaller than Alabama alone, has \$997,000,000 invested in manufacturing, against \$657,000,000 in the entire fourteen Southern States from Maryland to Texas. West Virginia, which is mainly tributary to Baltimore, and the development of which means the enrichment of this city, has far greater wealth creating capabilities in coal, iron and timber than Pennsylvania. It has, in fact, 50 per cent. more coal area than Great Britain. The entire coal area of Great Britain is about 12,000 square miles; West Virginia's coal area is 17,000 square miles.

"Much of the wealth of the Northwest is due to the great timber regions of that section, and many of the millionaires of Chicago, Milwaukee, St. Paul, Grand Rapids and other places have made their money wholly out of timber. The South has, according to government statistics, more than one-half of all the standing timber in the United States, even including the great forests of the Pacific coast.

"Probably the greatest single industry in the world, as it is estimated by good authorities to exceed even the iron and steel business, is cotton and cotton manufacturing. Cotton manufacturing has been the foundation of much of the wealth of New England and Great Britain. It represents an aggregate investment in manufacturing of largely over \$1,500,000,000, and possibly including all industries, such as textile machinery, etc., dependent upon it, over \$2,000,000,000. Of the cotton consumed in Europe and America about 75 per cent. is produced in the Southern States, but up to the present time that section has scarcely 4 per cent. of the cotton spindles of the world.

"Here are the four great industries, the foundation of nearly all manufacturing—coal, cotton, iron and timber—each of which has made some other section or some other country enormously wealthy. In the South all four are combined, furnishing a basis for industrial expansion of which the world has no parallel.

"We have just commenced in the Southern States the utilization of these resources. What has been done is but the faintest indication of the progress which is before the South during the next few years.

"Added, however, to this industrial development there will inevitably be a southward movement of population rivaling in magnitude that which swept into the Northwest fifteen or twenty years ago, creating as it did that mighty empire. Already this movement is fairly well under way, and probably not far from 1000 settlers a day are locating in the South. These people will engage mainly in diversified agriculture, in the raising of fruits and vegetables and foodstuffs, for which nearly all of the South is most admirably adapted.

"Baltimore stands at the threshold—the gateway of this mighty Southern region. It is in its power, largely through this exposition, to centre here the full force

of this great Southern advancement. With this exposition on a sufficiently broad scale to bring the South and the North together in 1897, Baltimore will become the common meeting-ground for all sections. It will share in the southward trend of capital and population, and every furnace, every factory, started in the South will then mean increased population, increased business and increased wealth in Baltimore.

"As no other country in the world has such a brilliant future before it as the South, for unto no other country has nature given such lavish advantages, so no other city in America has such an opportunity for industrial, mercantile and financial advancement as Baltimore.

"The exposition is the supreme opportunity in Baltimore's history. It will mean a new point from which to date all future progress; it will mean a vaster increase in our trade and population, and in every business interest of the city, than we can well comprehend now."

OUR SOUTH AMERICAN LETTER.

Interesting Facts About South American Countries.

[Special Correspondent, MANUFACTURERS' RECORD.]

MONTEVIDEO, URUGUAY, January 26.

Uruguay and Paraguay have little manufacturing, though Paraguay has more than Uruguay. Both are agricultural countries, though with many elements of raw material for industries.

Uruguay raises sheep, cattle, grapes, tobacco and wheat, and already has industries making jerked beef, extract of beef, wine and flour. She has already 1000 acres planted in vineyards, and one man makes 1000 casks of red wine yearly, for which he gets \$50,000, and a company has been raised in Montevideo with \$100,000 capital to develop the wine business.

Uruguay makes and exports 100,000,000 pounds of jerked beef, and has 100 mills, the most of them steam, that make 100,000,000 pounds of flour. She has also gone into the frozen meat shipment on a good scale. She exports largely of bones, bone ash, cow hides, calf skins, wool and other things. Her wool clip is 70,000,000 pounds, and she had in 1889 20,000,000 head of stock of one kind and another. She thus has raw material for wool and leather factories of every kind, besides others.

Uruguay has one of the best technological colleges in any country—a government "La Escuela de Artes y Oficios" for orphan boys with 300 pupils. It was founded to educate poor boys in trades and professions. It covers a wide range of instruction, from ordinary carpentry to building great ships, and from all kinds of wood-carving and metal work to the making of tools and instruments. The institute built entire the powerful gunboat the Rivera, and launched it. The boys did good service in the revolution.

The institute does a large variety of work—fire-arms and watches, carving and photography, silver work and weaving, ship-building and clocks, cartridges and furniture, boilers and weaving, mechanism and shoes, carpentry and printing, tailoring and painting, engraving and plaster models, instruments and bookbinding and other things.

Paraguay has a wider range of industry than Uruguay, and some of her manufacturing is right famous. Her lace and jewelry are known widely and much sought after. At Aragua are women towel-makers and lace-makers that embroider and fashion the most exquisite lace handkerchiefs and collars and piano covers and shawls, besides that for dresses, called nanduty lace. These women also make puzzle rings of gold of unique designs and delicacy of workmanship, said to be unequalled. In

Buenos Ayres there is a store that is named the Paraguayan lace store.

The Paraguayan natives use their native textile plants of jute, palm, ramie, mapajo, pineapple and others of fibrous quality into excellent and durable home-made clothing. They also distill an excellent article of rum in home-made stills from the sugarcane. They have quite a stock of mills of various kinds—two vermicelli factories, two breweries, two soap and two flour mills, steam; steam saw mills, several tanneries, two each of macaroni, match and sugar mills, an ice factory and some brick concerns. An enterprising Yankee in Aragua is getting the essence of the oranges, and finds a market in distant Europe.

Uruguay has 72,172 square miles and 750,000 people, and does \$60,000,000 of foreign trade. Paraguay has 88,807 square miles and 600,000 people, with 150,000 of them Indians.

The United States does no business with Paraguay, but should. It is a very interesting country, and with many natural advantages. It raises 65,000,000 oranges. It has very fine woods. It admits free of duty machinery, farm tools, railroad supplies, water and gas pipes, cement, wire, coal, iron, engines, breeding animals, sugar, fresh fish and fruits, bottles, barrels, books, maps, paper, plants, vines, seeds, lime, soda, resin, copper, gold, silver, sulphuric acid, gums, barley and corn.

VALPARAISO, CHILE, February 10.

Chile affords a very fine opportunity for industrial propagandism and investment.

There has been enough industrial development to wet the appetite of the people for more. The Chilean people are progressive and enterprising. They are wealthy and smart.

They have established a few woolen, cotton and paper mills, crockery factories, sugar refineries and flour mills. They make large quantities of fine wines, amounting to 24,000,000 gallons in 1892, and the manufacture is steadily increasing. It is as fine a grape and wine country as California, but they have not made as much advance in scientific wine-making.

In 1892 Chile had 12,000,000 sheep and more than 500,000 cattle. I saw it stated that the increase in sheep from 1893 to 1894 was 25 per cent., making all allowance for exaggeration. There ought to be now in 1895 as many as 15,000,000, and the manufacture of the raw wool at home affords a fine field for the establishment of wool industries. The pasture region for sheep and cattle is in the southern part of Chile, and is very large, with vast areas unused. Punta Arenas is the shipping port for this region, situated on the north side of the Strait of Magellan, 200 miles from the Pacific ocean and 130 from the Atlantic, with deep water and a vast basin there. This town is growing rapidly. It has 3000 people now. Four large ocean steamers were in port, and many small vessels.

The "Orcana," of the Pacific Mail Steam Co., of England, on which I traveled, stopped there, loading up with wool and minerals. A gentleman representing an English bank had arranged to establish a branch of his bank in Punta Arenas. An English company has leased a body of 200 square leagues, and is engaged in raising sheep on a great scale.

There are 20,000,000 bushels of wheat raised in Chile to be made into flour. There are very rich woods to be manufactured.

There are valuable coal mines to furnish coal for manufacturing. These mines are now worked, and 1,000,000 tons are yearly taken from them. The copper mines are also valuable, and mined on a good scale. A very valuable manganese exists in large quantities, and iron material for manufacture.

The government is offering every en-

couragement to the introduction of new industries and the use of new inventions, and in Santiago there is a large, wealthy and powerful society, the Sociedad del Fomento Fabril, of which a wealthy banker, Senor Domingo Matte, is the president, which has a fine building and was organized to encourage industrial growth. This organization will give full information to parties interested in this industrial matter.

The Congress of Chili has appropriated \$10,000 to make an exhibit at the Cotton States and International Exposition to be held in Atlanta, Ga., this year, and I have suggested to Chili and all the countries that I have visited in the interest of the exposition to create a complete exhibit and move it to the Baltimore Centennial Exposition in 1897, adding the new matters of development.

The department of public works has the exhibit in charge, and a profound interest is felt in it in all Chili. The republic has entered upon a campaign of development with remarkable energy and wisdom. Its recent Exposition of Mining and Machinery was an example of its spirit of enterprise.

Baltimore should establish lines of steamers to all these South American countries. Now is the time to inaugurate such a movement.

I. W. AVERY.

A Projected Steel Plant at Birmingham

It looks as though Alabama is at last to secure its long-hoped-for steel plant. Preliminary arrangements have been made for a combination of interests which, it is reported, will result in the establishment of steel works. The Jefferson Steel Co., which owns the old Henderson steel plant, an experimental plant put up several years ago, has for some time been negotiating with the Birmingham Rolling Mill Co. and the Sloss Iron & Steel Co. for such a combination of effort as this. The Birmingham News states that the outcome will probably be that the Rolling Mill Company will acquire the Henderson steel plant, that melted iron will be furnished from the North Birmingham furnace of the Sloss Iron & Steel Co., a few hundred yards distant, and that the hot iron will be made into steel at this plant, the output to be used by the Rolling Mill Company, which agrees to take it for a number of years. This, the News says, will probably result in the organization of a company to carry out this undertaking by fitting up the steel plant so as to give it a capacity of 100 tons a day. Mr. Eugene F. Enslen, of the Jefferson Steel Co., has been carrying on the negotiations with the other people interested in the matter. Should this movement be successful, and Birmingham thus secure this important enterprise, it would be of incalculable value not only to Birmingham and Alabama, but to the entire country.

Developing Carolina Coal Beds.

The Langdon-Henszey Coal Mining Co. is completing preparations to ship from its mines at Egypt, N. C., on a large scale to Wilmington, N. C., to provide for vessel trade. A conference of the principal officials of the company was recently held in Wilmington, at which Charles B. Evans, of New York, general export agent, stated that shipments would be made to West Indian, Mexican and Texas ports, and a specialty made of this trade, while Wilmington would become a coaling port for many of the transatlantic steamers running from the South Atlantic and Gulf ports as well as the coast vessels. The Egypt mines are but 124 miles from Wilmington. The Langdon-Henszey Company controls 4300 acres of the coal lands, and can, it claims, mine from 2000 to 3000 tons daily. The chutes at Wilmington are reported as able to handle 1000 tons daily. It is stated that chutes will also be constructed at Portsmouth, Va., for loading this coal by the Seaboard Air Line.

A Free School of Mines.

By Courtenay De Kalb, E. M.

The existence of a school for higher technical education which is neither distinctly Western, Northern nor Southern, whether viewed from the point of geographical location or of patronage, and which is open on equal terms to students from every State in the Union, is a circumstance of no inconsiderable interest. Such an institution is the School of Mines of the State of Missouri, in whose foundation the most liberal policy has been pursued, and which, by virtue of recent improvements, may justly claim to rank among the foremost technical schools in America.

Its situation is peculiarly fortunate, located as it is near to the great lead and zinc mines of Missouri, and within easy reach of the mining districts of the Southern States, of those of Colorado and the West and those of Lake Superior and Pennsylvania. It is eminently central. Moreover, it is situated high up among the Ozark hills in the little city of Rolla, only 111 miles from St. Louis, in a climate noted for its salubrity, and where the short winters exercise but little restriction during the academic year upon practical field work, which plays so important a part in modern scientific education.

Until recent years the School of Mines has labored under the disadvantages of inadequate equipment, but its curriculum has been of so high a grade that its alumni may be found occupying prominent positions in the leading mining centres of the West and of Mexico. The erection of a commodious and well-equipped chemical laboratory added to the prestige of the school, and attracted a still greater number of technical students, and now the completion of a new metallurgical laboratory has provided such a guaranty of thorough, high-class instruction that this institution may be regarded as fully launched upon a career of usefulness no longer circumscribed by narrow limitations.

The new metallurgical laboratory is of more importance than its mere name might imply to the mind of a layman. It is not a place where experiments are performed with apparatus peculiar to college halls, but is a large building fitted with appliances of every sort for the practical treatment of ores, where the student may receive instruction in the adjustment and use of the very machines and furnaces which he will meet with in actual practice in the field. The old reproach upon the graduate of technical schools as to his overweening pride in theory and utter ignorance of tried methods by which men turn the products of the mine into wealth for themselves and the nation cannot in these days be cast upon him, at least there is no reason for it, since the needs of practical training within the college itself have been met by ample provision, at great cost, of elaborate plants, where skilled engineers and metallurgists guide the students in acquiring swiftly an amount of practical experience which their less fortunate predecessors of a past generation were forced to slowly gain amidst many "hard knocks" and bitter failures.

The metallurgical laboratory of the Missouri School of Mines is an excellent example of what such a plant should be. The millroom is a spacious enclosure 42x75 feet, with a wing in which are two thirty-five horse-power boilers and an automatic fifty horse-power engine. In the main room is located the machinery, consisting of rock-breakers, rolls, hydraulic classifiers, jigs, spitzkasten, a stamp battery for gold and silver ores, a Frue Vanner concentrator, grinding pan, settler and system of settling boxes. There is also a reverberatory roasting furnace adapted for lead, silver, gold and copper ores, a water-jacket blast furnace for smelting lead, silver and copper ores, bullion furnaces, etc. Apparatus for the chlorination of gold ores, the cyanide

process, which has lately become so prominent in the metallurgy of gold, the lixiviation of silver ores, as well as a zinc furnace, and some additional crushing and concentrating machinery are about to be put in place. Thus a student will learn by repeated trials with full-sized modern appliances to crush and concentrate every class of ore, as well as to carry them through each successive metallurgical process up to the finished product in the condition in which it should be sent to market. Anyone having come in contact in any manner with practical mining operations will at once perceive how invaluable such experience must prove to the student destined to follow the profession of a mining engineer.

In addition to this, the metallurgical laboratory contains a handsome two-story apartment fitted up with a chemical laboratory, intended solely as an adjunct to the mill, for assays and tests to check up on the work then in progress; a blow-pipe laboratory for mineralogical work, a lecture-room, office and library, and a spacious well-lighted drawing-room for the use of students in designing machinery, mills and other plant connected with mining operations. There is also a petrographical room for the study of rocks, and a photographic outfit, including a dark-room for practical work in blue-printing and photography.

It will be seen that the manifest aim of the Missouri School of Mines is utility, practical training, and as if to make still more certain of attaining this purpose, a considerable number of the professors are men whose careers have not always been identified with instruction, but who have been drawn from the field after years of practice. Although primarily, as its title indicates, a school of mines, it is really much more than this, having also departments of civil and chemical engineering well filled with students. A movement is now on foot to provide another building devoted to the purposes of an engineering laboratory for general testing, electrical and other accessory mechanical training suited to the needs of the engineer.

All these advantages are offered to students from any part of the United States or foreign countries absolutely free of charge, so far as tuition is concerned, only trifling fees being exacted to cover laboratory breakage. There is probably no other place in America where a similar education can be obtained at so low a cost, and where at the same time the students are free from the demoralizing influences of a metropolis.

Western Irrigation Making a Market for Southern Iron.

LOS ANGELES, CAL., March 22.

Editor Manufacturers' Record:

I have noticed in my travels in California that a very large per cent. of the many extensive irrigation systems which are now being constructed in the southern portion of the State are being supplied with iron pipe manufactured in the Birmingham (Ala.) district. When we think of this and of the vast expanse of arid country lying between the Mississippi river and the Pacific coast which can only be reclaimed by expensive systems of irrigation, we are forced to conclude that the far West is soon to become one of the largest consumers of iron of any section of the country.

These ideas, taken in connection with what we see from the letters of your correspondent in Monterey, Mexico, and with the further idea of the early completion of the canal through Nicaragua, show that it is hard to predict or imagine the colossal business which must be in store in the future for the iron manufacturers of the South. While this trade from a geographical standpoint belongs to the Southern States, at the same time these manufacturers should not lose

sight of their shrewd competitors north of the Ohio river. They are here now, and are here to stay, and it may be expected that, even though this trade be extended into the extremes of South America, these same gentlemen will be found in the field contesting every inch of ground for this valuable trade. It properly belongs to the South, if she will only reach out and take it.

L. B. WHATLEY.

Mr. John Fulton on the \$5 Iron Question.

JOHNSTOWN, PA., March 20.

Editor Manufacturers' Record:

The writer makes it a principle not to notice anonymous articles. I only wish in this controversy touching the cost and economy of iron-making in Tennessee to set myself right before your many intelligent readers.

It may be submitted here that in the discussion between Mr. Eugene Davis and the "great unknown" as to the minimum cost of making pig iron in Campbell county, Tennessee, I have taken no part in it.

Mr. Davis is evidently familiar with the mineral resources of this section of the State, and can, therefore, speak from personal knowledge. I have not had the opportunity of examining the locality in question to consider its iron-making minerals, with the cost of their assemblage at the furnace; hence in this matter I have no contribution from personal knowledge to one side or the other.

I have been touched on the outer edge of this "storm circle" by the "man afraid to give his name," impeaching the value of my determinations of the physical and chemical properties of coke for blast-furnace purposes made from coal in the property under consideration. The several tests of this coke were submitted in a tabulated form in comparison with similar determinations of the standard Connellsville coke. I found it physically so near equal to the standard coke, and in purity its superior, that I concluded in my report "that it was substantially equal to the Connellsville coke." This is all that I have been called upon to do in this matter. The "unknown" states that my report "on the quality of the coke has little weight amongst practical iron men." It is submitted that this impertinent assumption is entirely outside the matters in controversy. They, however, show the animus of this person in the effort of belittling everything southward. Not only this, but his assertion is absolutely untrue. This will be made evident from the blast-furnace test in connection with my report on the value of coke made at Pineville, Ky.

The report and furnace test were embraced in a paper read at the Baltimore meeting of the American Institute of Mining Engineers, February, 1891, by Mr. J. H. Allen, the general manager of the coke works.

The following communication from the Nashville Furnace Co., Nashville, Tenn., to Messrs. J. D. Anderson & Co. states the result of this test:

Gentlemen—In reply to your favor of this date, we have to say that on the 23d, 24th, 25th and 26th inst. we made a test at our furnaces of the Cumberland Valley Colliery's Pineville coke. As the coke was new to us, we, as a matter of prudence, charged light in the beginning, using 4000 pounds of ore and 2800 pounds of coke. The furnace being too hot, on the 23d we increased the ore to 4800 pounds. The furnace still being too hot, on the 24th we increased to 5300 pounds, being the same burden we had carried with Pocahontas coke. We produced as much iron and a higher grade of iron than we had previously done with other cokes.

H. W. BUTTORFF,
President and General Manager.

J. H. HANBY,
Superintendent and Furnaceman.

These tests, made independently, and without the slightest knowledge or conference between the laboratory and furnace, demonstrate beyond cavil the absolute correctness of the former. They also

assure the value of these Southern cokes for metallurgical uses.

In conclusion, it is respectfully submitted that in conducting such discussions personalities do not constitute evidence one way or the other.

The facts only carry weight when clearly stated, forming the sure basis for conclusions, favorable or otherwise. It is only necessary to submit and consider facts.

JOHN FULTON, Mining Engineer.

"Southern Iron."

Editor Manufacturers' Record:

I note in your last issue letters from Mr. Procter and Mr. Davis regarding my previous letter asking information concerning the La Follette property.

I will shortly reply to Mr. Procter. At present I am awaiting the receipt of some papers which I desire to quote.

Regarding Mr. Davis, as he either has not or is unwilling to give the data for which I asked, there is nothing further to be said. His questions concerning myself can be fully answered by the editor of the MANUFACTURERS' RECORD, who is also aware of my reasons for signing a *nom de plume*.

"SOUTHERN IRON."

Labor Legislation and Manufactures.

THE MANUFACTURERS' RECORD commends to its Southern readers the following editorial on labor legislation from the New York Post:

"Legislative 'hearings' are seldom scenes to which a wise man would resort in the hope of hearing wholesome truth set forth without fear or favor, but the hearing granted last week by the committee on mercantile affairs of the Massachusetts legislature was an occasion at which anybody but a legislator might have profited. The committee was about to go South to investigate the question of the competition between Southern cotton mills and those of New England, and first invited some of the leading cotton manufacturers of the State to present their views of the question. Such well-known men as Mr. Jefferson Coolidge, W. C. Lovering, A. A. Lawrence and Joseph Healey appeared before the committee, and their remarks, a summary of which we have printed, discovered a most remarkable state of things.

"The first point these manufacturers set forth with convincing evidence was the fact that their industry remains in New England at all only on sufferance. It is away from the raw material. It is away from a cheap coal supply. It has to employ high-priced labor. On its side is the advantage of skill and experience, but these the Southerners are rapidly acquiring and adding to their natural advantages for the manufacture of cotton. Within the past two years Massachusetts increased her spindles absolutely less, and comparatively much less, than the four Southern States which have taken up cotton spinning. In the South new mills are building every day, while not one is building in New England.

"Thus the natural tendency clearly is for the cotton industry of Massachusetts to go ultimately where her rolling mills have gone, where her locomotive works have gone, where her furniture factories have gone and where her shoe manufacturing shows signs of going—to seek the base of supplies," as Mr. Lovering said. Mr. Coolidge spoke with emphasis on the question of coal supply. In the South coal can be had for eighty cents to \$1.50 a ton. "In Lowell the same coal will cost from \$3.50 to \$4.50." In his mill the item of coal alone meant an extra cost, as compared with the South, of \$60,000 a year. This shows how true a representative of his section that New England Senator was—it was Senator Hoar, we believe—who said in the tariff debate that no New England manufacturer had asked for free coal. The Southern cost of labor is, according to Mr. Coolidge, 30 per cent. less than that in

Massachusetts, and the mills are run from an hour to an hour and a-half longer each day.

"Now, with this fatal handicap laid upon Massachusetts cotton mills, with the almost absolute certainty that they must ultimately go South in spite of everything, what would it be expected that the policy of the State would be towards them? Would not one say that the legislature of Massachusetts, the stronghold of protection, the sacred seat of the Home Market Club, would surely do everything in its power to retain the industry, to refrain from assaults upon the \$130,000,000 of capital invested in it, and to throw every make-weight into the scale in order to withstand the natural tendency as long as possible? But what are the facts? It has, in the first place, laid a great burden of direct taxation upon the mills. Mr. Coolidge said that a Massachusetts mill that had to pay \$90,000 a year in taxes would, under English rates, pay no more than \$30,000 to \$40,000, while in the South it would not be taxed at all. But, worse than this, it has year after year pursued and pestered the manufacturers with 'labor' legislation, until, as Mr. Lovering said, 'no sooner does the legislature assemble than a tremor runs through our business community—a fear lest some act will be done that will threaten the existence of our industries or further impair the extremely small margin upon which they are carried on.' Mr. Coolidge affirmed that the trades-unions and the bills 'gotten up by some man who is mostly concerned with some fancy to do good to mankind' had already forced him to sell goods at a loss, and that it was simply a question of getting some relief or going South. Mr. Healey was blunt enough, and said: 'I will tell you frankly, when I was present and looking at the House of Representatives in this Capitol one would have thought it was the headquarters of the labor unions.' He was told that the South's turn for labor legislation would soon come, and that then matters would be evened up. But what comfort was that to him if in the meantime he was ruined?

"As a matter of fact, a Southern legislature, that of North Carolina, was almost at the same time displaying a business sense that ought to make the Massachusetts representatives blush for their Yankee cuteness. At Raleigh, as at Boston, 'labor' was on hand with its bills for regulating the cotton mills. But the whole batch of them was tabled as fast as they came up, and no more philanthropic reasons were given for this action than 'the argument that any legislative "monkeying" with the present condition of cotton-mill labor in this section would check the Southern movement in cotton manufacturing, and cause many Northern investors who now contemplate putting money into Southern cotton-mill property to seek other fields for the safe and profitable investment of their capital.'

"The whole affair is an extreme but characteristic illustration of the idea that has got into so many heads that it is possible to legislate for 'labor' without affecting work and wages. A 'committee on labor' is about the deadliest enemy industry has to encounter. Suppose the department of labor were called the department of work, does not everybody see that all the glamor would be gone? 'Labor' is not really concerned about work, about steady employment and regular wages, but about certain dignities and privileges, about certain crampings and hamperings of capital. It is not often, however, that the folly and fatuity of it are so patent as in this Massachusetts experience. The greatest folly of all is to suppose, as the sapient men of Boston did, that if North Carolina would only vex and oppress the manufacturers, then they could be kept in Massachusetts. Persecuted in one State, the manufacturers will undoubtedly flee to another; but persecuted in all States, they will simply cease to be manufacturers. Before confiscation in the name of 'labor' arrives there will be nothing to confiscate."

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department, on page 142.]

More About Railroad Construction.

After a silence of several weeks the Railway Age "comes back" at the MANUFACTURERS' RECORD on the subject of railroad construction in 1894, attempting to reply to the article in the MANUFACTURERS' RECORD of February 8, in which we took the liberty to point out several errors into which the Age had fallen. The subject has become somewhat timeworn, and as the MANUFACTURERS' RECORD details what the South is doing, and is a paper of the present rather than of the past, we will only say on this point that the statements in the last article of the venerable Western contemporary have been already answered in these columns, with one exception—the Alabama extension of the Chattanooga Southern. The wording of the Age's table made it appear as if but one mile of this line had been built in 1894, whereas the distance was about four miles, according to Receiver Burke's statement. It seems, however, that the Age wants it to appear that the extension was three miles and that the MANUFACTURERS' RECORD had overstated a mile. This may be possible, but we think it safe to go by Mr. Burke's report. The Age does not explain why it did not include the Texarkana & Shreveport line in the Kansas City, Pittsburg & Gulf system, to which it properly belongs, or how passenger trains were hauled to Lake Worth early in 1894 over the Jacksonville, St. Augustine & Indian River line, which, it states, was not completed.

In each of its criticisms of the MANUFACTURERS' RECORD our esteemed collaborer in the railroad world intimates that the work of gathering statistics of this sort requires many years; in short, it infers that a paper has to be "in the business" twenty years or more before it can do so. This idea is both original and amusing. The Railway Age is a pretty fair paper of its kind. It publishes some interesting matter. We admit that the "Auditor's" and the "Inspector's" columns are worth reading. It also publishes considerable news of railroad construction, even if a few notes previously given in the MANUFACTURERS' RECORD do creep in occasionally. But when the Age thinks that it is necessary to be in existence twenty years or so before a paper can compile statistics of railway construction, we must say we are astonished. Does our friend think other people haven't the same right to collect these figures? Does it think it is the only paper in the country which occupies this field? We know the editor has been writing novels lately, but did not suppose he had fallen into such a train of thought, and we hope he will stop a minute and consider that there are other journals in the same line of work which have equally as good facilities for doing it. It is hardly necessary to say that the MANUFACTURERS' RECORD, being in touch with capitalists and promoters in every line of Southern development, has opportunities for obtaining reliable data which are unexcelled, but we are glad to have any contemporary take up this work in the South, as it assists in the work of making the resources of this favored region known throughout the country.

Only don't get the idea that you are the only one which can do it. The world is too large for such ideas.

More Improvements.

In addition to making improvements to the rolling stock of the Atlantic & West Point and Western Railway of Alabama, President Smith has just closed a contract with the South Bethlehem Iron Works for

twenty-five miles of steel rails, which will be laid on his roads during the coming summer. The rails will be seventy and sixty-three and a-half pounds weight.

New Line to Savannah.

The Macon, Dublin & Savannah has just concluded negotiations by which it secures the right of way, completed and projected, of the Macon & Atlantic road. The Macon, Dublin & Savannah is projected between Macon and Savannah, Ga., 168 miles. It was completed from Macon to Dublin, Ga., fifty-four miles, in 1891. The Macon & Atlantic is completed for thirty-one miles between Brewton and Stillmore, Ga., while seventy-eight miles on the Savannah extension are graded. This is all included in the purchase, which gives the Macon, Dublin & Savannah eighty-five miles of track, besides the seventy-eight miles of grading. The latter company includes several Western parties, the construction company being known as the Illinois & Georgia Improvement Co. The officers are G. B. Shaw, of Chicago, president; James T. Wright, of Macon, general manager, and Hardy Smith, Dublin, treasurer.

The route of the new line is about forty miles shorter than any other between Savannah, Macon and Atlanta, while it has extensive terminal property in Savannah. At Macon it connects with the old East Tennessee, Virginia & Georgia road for Atlanta. It is understood that the company intends completing it as soon as possible.

May Go to New Orleans.

A dispatch from Shreveport, La., announces that the Missouri, Kansas & Texas has made a proposition, which has been accepted, to enter that city over the tracks of the Vicksburg, Shreveport & Pacific division of the Queen & Crescent system, provided the city will give ground for a depot and right of way into the city for its own tracks. The Missouri, Kansas & Texas will build from Jefferson, Texas, its present terminus, to Waskom, near the Louisiana border, where connection will be made with the Queen & Crescent. This move will give the Missouri, Kansas & Texas a combination with the Queen & Crescent, and it is possible that by it Missouri, Kansas & Texas trains may soon be entering New Orleans by way of Meridian, Miss.

The Kansas City, Pittsburg & Gulf and the Kansas City, Watkins & Gulf are also considering the idea of extending their lines to Shreveport. If they do, the city will become one of the most important railroad centres of the South, having four large systems entering it.

Another Mexican Railway.

A dispatch from Mexico states that it is announced officially that the government has approved the concession granted to a syndicate of American capitalists, of which George Pullman is a prominent stockholder, for the construction of a railroad from the coalfields of Borortaran to Nueva Laredo, and thence along the Rio Grande border to Matamoras, and from there down the gulf coast to the port of Tampico. This road will traverse one of the richest agricultural sections in Mexico. The proposed road is subsidized by the government for a distance of 350 kilometers. The contract for the construction of the line will be let immediately.

A Transportation Association.

An effort is being made in Southern cities to organize a Southern Transportation Association to include all the principal communities. The object is to protect shippers from exorbitant freight rates and to take other action to their advantage. The business organizations will be asked to become members.

NEW FLORIDA LINES.

The Flagler System May Be Extended to Key West—Over 600 Miles of Construction Work.

The railroad development in Florida within the last two years has been remarkable and has kept pace with progress of the State in other directions. At present three companies control most of the mileage completed in the State, and each is planning lines which will, if possible, give it the advantage of the winter-tourist travel to the various resorts and the West Indies, also of the traffic in phosphate, fruit and vegetables and lumber. Until the Florida Central & Peninsular was completed from Savannah to Jacksonville the Plant and Flagler systems had a monopoly of most of the passenger and freight traffic to the seaports and points outside, the former connecting with the Atlantic Coast Line at Charleston, and having terminals at Tampa, Jacksonville, Savannah and Brunswick, Ga., on tidewater, while the latter reached Jacksonville and St. Augustine on the east coast, with its southern terminus at Lake Worth, the famous winter resort. The completion of the Florida Central & Peninsular formed a new route from Columbia, S. C., where it connects with the Southern for the North, through Savannah and Jacksonville to Tampa, on the west coast of the peninsula and the centre of the lake region at Orlando. Thus the systems of which H. B. Plant and H. R. Duval are the heads have secured nearly equal advantages for obtaining freight and passenger business in the State, although the last move of the Plant system in securing the Sanford & St. Petersburg gives it two roads to Tampa bay, which, with its line to Punta Gorda on Charlotte Harbor, makes two important gulf seaports it reaches. At present the Flagler system has only Jacksonville and St. Augustine as seaports on its route, but there is every indication that it intends extending to the west coast also and securing a portion of the West Indian trade from the gulf ports, also of having a monopoly of the traffic from the Kissimmee Valley region. This it can obtain by building the road now being surveyed across the peninsula from Rockledge to Charlotte Harbor. The route is about 150 miles in length. By it Northern tourists could go from Jacksonville, stopping at the various resorts on the St. Augustine and Indian rivers and Lake Worth; thence across to the west coast, and from Charlotte Harbor by vessel to the West Indies and Mexico. This route would be in competition with the Plant lines to the West Indies via Tampa.

But in addition to the energy being displayed by the Plant, Duval and Flagler people, a number of smaller enterprises in railroad building are being carried out which will make the next few years notable for the amount of railroad construction in the State. Among the latter are lines being built by the Peace River Phosphate Co., several Plant-system extensions in the lake region of the State, also a project to extend the Suwanee River line from the river to Cedar Key, on the gulf coast. All in all, it is estimated that fully 600 miles of railroad building will be done in the State within the next two years, of which 300 will be on new lines and 300 on narrow-gauge routes rebuilt.

Since the above was written the MANUFACTURERS' RECORD has received information that the Flagler system will likely be extended south from its present terminus at Palm Beach to Biscayne Bay, on the east coast, near the southern extremity of the peninsula, and eventually that the road will probably be built on trestle-work to Key West. The distance is sixty-five miles to Biscayne bay and about 250 miles to Key West. In connection with the railroad project, it is understood that another large hotel is to be erected by Mr.

Flager at Biscayne Bay, to be about the same dimensions as the Royal Poinciana at Lake Worth.

Bids for Building a Railroad Wanted.

Mr. T. H. Leslie, of Gillett, Ark., vice-president of the Stuttgart & Arkansas River Railroad, writes the MANUFACTURERS' RECORD: "I should like to have bids for a 12-mile extension of the Pine Bluff & Eastern Railroad from its present terminus to a junction with the Stuttgart & Arkansas River Railroad. Both roads run through a rich agricultural country, rapidly filling up with farmers from the North and Northwest, and both have tributary to them enormous timber resources. At Gillett, the present terminus of the Stuttgart & Arkansas River road, a very fine manufacturing development is in progress. The connections of the Pine Bluff & Eastern are the St. Louis Southwestern, the St. Louis, Iron Mountain & Southern and the Arkansas River Packet Co. I want bids on three, six and nine months' time, with \$100,000 of bonds as collateral. Nearly the whole of this extension is level, and railroad building very cheap.

Another Rumor Denied.

Several rumors regarding the movements of the Seaboard Air Line have been current, the latest of which is in the form of a special dispatch from Baltimore sent to the Northern papers that the Seaboard had acquired the "North & West" Alabama road and would use it as an extension to Birmingham. The road referred to is the East & West Alabama. President Hoffman informs the MANUFACTURERS' RECORD that there is no truth in the rumor whatever. The Seaboard has a Western connection by way of the Nashville, Chattanooga & St. Louis.

Combining Suburban Roads.

Mr. Henry M. Earle, one of the directors of the Georgetown & Tennallytown electric road, writes the MANUFACTURERS' RECORD that this company is planning to operate the electric lines to Bethesda and Glen Echo, in the suburbs of Washington, and that the Georgetown & Tennallytown and Rock Creek roads may also be combined so as to secure power from the same station. The former road has been purchased by a syndicate. O. T. Crosby is president; C. M. Leib, vice-president, and H. T. Purdy, secretary.

A Prosperous Company.

The Merchants & Miners' Transportation Co. is a Baltimore corporation which has shown how valuable is the Southern coasting trade. It established a line between Baltimore and Boston in 1854, later extending its service to Providence, R. I., and Savannah, Ga., touching at Norfolk, Va. It has a fleet of eleven steamships in commission and another one is being built. It has become one of the most important transportation companies in the country, and has had a very prosperous career. At the last meeting the present board of directors was re-elected as follows: George J. Appold, Michael Jenkins, Henry James, Decatur H. Miller, Jr., all of Baltimore, and E. P. Whitney, of Boston. At a subsequent meeting of the board Mr. Appold was re-elected president and Michael Jenkins, vice-president. It will be noted that all the directors but one are from Baltimore.

Railroad Notes.

T. D. STANTON has been appointed general manager of the Knoxville & Fountain City road at Knoxville, Tenn.

WILLIAM P. THOMPSON has been elected president, and George A. Burt, vice-president, of the Ohio River Railroad Co.

THE Mobile & Ohio has improved its passenger service by increasing the number of trains to and from Mobile. As a

result, traffic has increased on each section very perceptibly.

THE Atlanta & Florida line, announced to be sold on March 23, was not disposed of on that date. The sale was postponed until March 30 at Atlanta.

MESSRS. R. W. SMITH and L. A. Shipman have been appointed traveling passenger agents for the Southern Railway Co. in Louisiana and Alabama.

CHARLES J. ALLISON, of Girard, Ohio, has been appointed engineer of the Ohio River, Knoxville & Tidewater road, projected by Albert E. Boone from Knoxville, Tenn., to Port Royal, S. C.

THE newly-elected board of directors of the San Antonio & Gulf Shore Railroad has elected the following officers: President, John Ireland; vice-president, G. G. Clifford; secretary, R. E. Sadler; treasurer, J. B. King. G. G. Clifford was appointed general manager.

At the annual meeting of the American Association of General Passenger and Ticket Agents, held in New York, the Southern lines were honored by the election of W. M. Davidson, of the Plant system, as president. W. A. Turk, general passenger agent of the Southern, will be orator at the next meeting.

AT the annual election for officers of the Mobile & Ohio the following were elected: W. Butler Duncan, chairman of the board of directors; Col. James C. Clark, president; James H. Fay, vice-president; John G. Mann, general manager; Henry Tacon, secretary-treasurer and transfer agent at Mobile; R. V. Taylor, general auditor; E. L. Russell, solicitor.

The Aggressive and Progressive South

It is pleasing to know that the South Carolina farmers are giving their minds to the enlargement of the hog crop; that the coal mine owners of Alabama and Georgia have taken means to enlarge the production of coal; that the horticulturists of Texas are adding to the varieties of fruits which they raise; that the Florida planters are turning their attention to the cultivation of lemons; that the North Carolina cotton manufacturers are building new mills in a dozen counties; that there is more interest throughout the South than there ever was before in the raising of grains and vegetables, and that, all the while, the cotton planters are not willing to reduce the amount of the acreage devoted to the great Southern staple. We have gathered all the foregoing facts from reports recently obtained from the States of the South, in which reports confidence may be placed. We need not here give details or evidence in confirmation of the statements.

For five or six years past the cry of "diversify the crops" has resounded in the South from the Potomac to the Rio Grande. We have always regarded the advice as good and sound. We have thought it could be put in practice, too, without diminishing the cotton crop, for there is such an abundance of fertile land and available labor in the South that, under wise direction, the lesser crops can be increased without any decrease of the larger crop. Besides, it should be considered that the cotton planters can better bear the prevailing cheapness of the staple if they raise their own supplies of grain, meats, vegetables and fruits.

In addition to the diversification of Southern crops, there is a remarkable enlargement of the iron and coal industries of the South and its cotton-manufacturing industry.

We agree with those who talk most hopefully of the development of the immeasurable resources of the Southern States. The spirit of the new South is aggressive and progressive.—New York Sun.

THE Gadsden (Ala.) Commercial Club has been organized with 100 members.

FINANCIAL NEWS.

Palatial Bank Building.

A palatial building has just been completed in Baltimore for the South's largest banking institution, the Merchants' National Bank. It probably gives this bank the handsomest home of any national banking institution in the United States, and is undoubtedly the most notable and ornate example of this class in the South. The liberal and magnificent scale on which it is planned is commensurate with the importance of this bank, and indicates the progressive policy of its officials.

The building occupies fifty-two feet on South street by 144 feet on Water street. It is eight stories high, and is designed in the modern Renaissance style of architecture. The three fronts, being entirely of a warm-tone granite, give a handsome and imposing appearance. The general construction of the work has been of the highest grade, and the materials used the best of their kinds.

The foundations are the first of the kind laid in Baltimore, being formed of four layers of beams, giving a width of twenty-two feet, all bedded in Portland cement, laid on solid gravel, below tide. Upon these foundations are erected steel columns to carry at each floor the large girders, giving a clear span.

This steel frame or "cage," which is now used in most buildings of special height, is designed to carry all the floor loads and strains of the building. It is encased in brick masonry, which protects the metal from fire. On the outside is the granite facing, which is not essential to the strength or support of the building, so that it could be removed without damage to the stability of the structure.

The building is fire-proof throughout. All the floors are constructed with steel beams, filled in and cased with porous terracotta arches, over which are laid concrete floors. The roof is constructed in the same manner and covered with copper. Wood does not enter into the construction of the building in any of its parts.

The banking department of the building is on the street level. It occupies the entire width of the lot, with a front of 100 feet on Water street. This space is finished as one large room, without columns or other obstructions, with a special entrance from the vestibule of the office building.

The principal entrance is through the portico in the centre of the bank. This is the most pronounced feature of the building, extending through two stories in height, with fluted and enriched Ionic columns and pilasters, and with the name Merchants' National Bank in raised polished letters on the frieze of the cornice.

The entrance proper is through an archway ten feet wide, protected by an elaborate wrought transom grille and solid bronze doors. The inner vestibule and light storm-doors are all of mahogany. Facing the entrance are the places of the four tellers, with the bookkeepers and general clerical force on the left, and discount departments, all inclosed by a richly-designed screen, made with Jane Lamartene marble and bronze.

A lobby twelve feet wide continues around two sides of the room, giving ample space for the transaction of business with the various departments. The cashier's and president's departments are separated from the public by marble railing and bronze gates.

The boardroom is in the southwest corner, on South street. It is handsomely designed and finished in mahogany. The south wall is finished with a handsome mantel, having the seal of the bank artistically carved in relief, with bookcases on each side.

All the furniture is of mahogany. Each desk is fitted with special lights, electric

calls and telephones to connect with the various departments, in addition to a telephone-room. Marble fountains are provided for drinking water. The room is wainscoted with Italian marble, and the double pilasters of St. Beaume marble are continued to the ceiling, supporting the girder lines, which are all arranged in panels richly ornamented.

In addition to the first floor, the entire basement under the bank department is devoted to the use of the bank.

The vaults are built from foundations below water-level. The inside lining is of welded steel and iron, inclosed in a solid steel-rail cage, incased in heavy masonry, over which is a close network of wires for protection against burglars. Over all is a beautiful marble and bronze outside finish.

Reports of National Banks.

Returns to the comptroller of the currency of the condition of the twenty-seven national banks of Georgia, exclusive of Savannah, on March 5 shows: Loans and discounts, \$5,809,000; lawful money reserve, \$922,871; gold, \$563,000; individual deposits, \$5,026,000; average reserve held, 38.85 per cent.

The twenty-six national banks of Alabama had loans and discounts, \$5,213,000; lawful money reserve, \$1,043,000; gold, \$880,000; individual deposits, \$6,261,000; average reserve held, 36.06 per cent.

From Maryland the forty-six national banks showed the following aggregates: Loans and discounts, \$9,692,421; lawful money reserve, \$1,063,991; gold coin, \$389,276; individual deposits, \$9,004,845; capital stock paid in, \$3,811,700; surplus fund, \$1,478,100; average reserve held, 26.62 per cent.

The thirty-seven national banks of Virginia show: Loans and discounts, \$15,411,000; lawful money reserve, \$1,503,000; gold, \$547,000; individual deposits, \$12,925,000; the average reserve held was 23 per cent.

The twenty-six national banks of North Carolina had in loans and discounts \$5,846,000; lawful money reserve, \$865,748; gold, \$339,518; individual deposits, \$4,810,000; the average reserve held was 38.72 per cent.

New Financial Institutions.

* G. A. Norwood, of Greenville, S. C., has applied for authority to organize the City National Bank of Greenville.

A branch of the Southern Building and Loan Association has been established at Forney, Texas, with T. J. Wildeman, president.

Louis Wells and Rod Oliver, of Hubbard City, Texas, are endeavoring to organize a bank at Frost, Texas, with a capital stock of \$75,000.

The Lafayette Banking Co., just organized at Lafayette, Tenn., has as president A. Bryan, of Watertown, Tenn., and J. W. Beckwith, cashier.

The Co-operative Mutual Life Insurance Co., of Greenwood, S. C., has been chartered with M. Pratt, president, and P. S. Dew, secretary and treasurer.

Application has been made to the comptroller of the currency by W. J. Johnson and associates, of Fort Smith, Ark., to organize the Fort Smith National Bank.

The Alamo Savings & Loan Co., of San Antonio, Texas, has been chartered by W. A. H. Miller, T. B. Johnson, W. F. Hale and others. The capital stock is \$10,000.

The Central National Bank is being organized at Spartanburg, S. C. W. A. Law will be president of the new bank, and J. C. Evins, cashier. The capital stock is to be \$100,000.

The Lancaster County Building and Loan Association, of Lancaster, S. C., has been chartered by T. Y. Williams, W. C. Thompson, R. B. Allison and others. The capital stock is \$50,000.

F. J. Murdock, O. D. Davis, W. Smith-deal and others will organize the Salisbury

Loan & Trust Co., at Salisbury, N. C. Charter was secured for this company from the North Carolina legislature.

The new national bank at Terrell, Texas, has been organized as the Harris National Bank with J. H. Muckleroy, president; Oscar Price, vice-president, and Walter Allen, cashier. The capital stock is \$100,000.

Bibb & Hoff have established a private bank at New Decatur, Ala. W. A. Bibb, of this firm, is mayor of the town, president of the local gas company, and was the assignee of the Exchange Bank of New Decatur. G. A. Hoff was the vice-president of the latter bank.

The Equitable Fire Insurance Co., of Charleston, S. C., chartered by the State legislature, has completed its organization. James F. Redding is president; A. Bequest, vice-president, and W. G. Mazyck, secretary and treasurer. The capital stock is \$500,000.

New Bond and Stock Issues.

Tuscaloosa county, Ala., has sold \$20,000 of bridge bonds to Trenton Robertson, of Columbus, Ga.

Tuscaloosa, Ala., will issue \$20,000 of bonds for municipal purposes. W. C. Jemison can give particulars.

Bids will be received at Coleman, Texas, until April 8 for \$15,000 of 40 year water-works bonds. The city clerk can be addressed.

An ordinance has been adopted by the city council of Manchester, Va., providing for the issuing of \$65,000 of 4½ per cent. bonds, payable in thirty-four years. The funds are to be used in the construction of sewers.

W. V. Atkinson, governor of Georgia, invites proposals until May 1 for the purchase of bonds to be issued in exchange for the issue of Northeastern Railroad bonds indorsed by the State. This issue, with accrued interest, amounts to \$290,000. The number of bonds to be issued will be determined by the cash payment made by the purchaser of this road at the sale to be held on April 16 at Athens, Ga. The bonds are to be of the denomination of \$500 each, bearing interest at 3½ per cent. and payable in twenty years.

Interest and Dividends.

A semi-annual dividend of 2½ per cent. has been declared by the Border State Perpetual Building Association, and an annual dividend of 6 per cent. by the St. Vincent de Paul Perpetual Building Association, both of Baltimore.

Financial Notes.

THE financial plan of the Hendersonville & Brevard Railway, Telegraph & Telephone Co., of Hendersonville, N. C., which is building twenty-two miles of railroad, embraces an issue of \$150,000 of 30-year 6 per cent. general mortgage gold bonds. The capital stock is \$250,000. A subscription to the capital stock of \$6000 in 30 year 6 per cent. gold bonds was made by Transylvania county and \$10,000 in similar securities by Hendersonville township. The trustee of the bond mortgage is the Central Trust Co. of New York city.

To Make Meal at Home.

The people of Washington county, Miss., whose practical plans to raise less cotton and more diversified crops were recently detailed in the MANUFACTURERS' RECORD, are preparing to carry out a portion of their plans. The Deer Creek Corn Elevator Co. has been formed at Hollandale, Miss., which will erect an elevator and mills for grinding and shelling corn raised in that vicinity.

SAVANNAH, GA., business men have decided to have a May carnival with the idea of attracting visitors to the city and stimulating trade.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department, on pages 140 and 141.]

Suggestions for a Cotton Organization.

NEW ORLEANS, March 23.

Editor *Manufacturers' Record*:

Let an organization be formed of Southern cotton planters, to be known as the Southern Cotton Planters' Protective Association, Limited. It is to be a chartered limited company, to which cotton-planters or raisers alone are eligible as members. Let the capital stock be \$500,000,000, with liberty to increase the amount by due action of the stockholders. Let no one be a stockholder who shall own less than \$1000 worth of stock, and prohibit anyone from owning over \$50,000 worth. Let all the stock be paid for in cotton. Let the assessments be by charter no more and no less than 20 per cent. of the subscription, so that in five calls of equal amount per annum the whole subscription will be paid in full in five years. Make all dues on stock payable on or before December 31 of each and every year, and forfeit all stock in arrears, commencing with the current year. Let all cotton of the stockholders be paid for in stock at a fixed price year by year, as a board of adjudicators decide, or at a price to be the same for the whole five years. This board should not consist of over twenty-five members, and should, as near as may be, be allotted among the cotton States in proportion to their production of the staple. Assuming that they will allow eight cents per pound for low middling the first year, or the whole five, other samples or grades will be paid proportionate prices. Prohibit this cotton from being sold in the open market for less than is paid for it until it shall have been held for at least four months, after which time it shall be sold at the best price in the most accessible market or markets. Four months shall be reckoned from January 1 of each and every year. Make it imperative to sell as soon as one cent per pound more than its cost can be obtained for it, no matter when delivered, either on or before December 31, stockholders being permitted to deliver their cotton in payment for stock at any time they please, except as aforesaid.

The association to be prohibited by charter from all speculation in cotton or in its own stock; also from retiring or diminishing its stock. It shall have continuance for at least twenty years, and may not merge with any other concern. The money or assets of the association are to be disbursed in cotton factories and pork packeries. These should be erected at various points in the cotton States, according to eligibility, all things considered. All things being equal, those localities offering the greatest bids or inducements in cash or equivalent bonus should secure these factories or industries of the association.

Hog-raising would increase production of corn, and this would measurably decrease cotton, and this would increase price of the staple.

Cotton should be sold to the factories at cost, and hogs to the packeries likewise. The cotton fabrics should be sold to the stockholders at cost, plus 10 per cent. profit, and the pork on the same basis. No stockholder should be able to buy more of above goods in any one year than to the amount of his stock paid in for that year on the basis of the above profit. For any greater purchases of the above merchandise than to the amount of his stock dues or installments stockholders should stand on the same footing with non-stockholders, except that the former should always have a preferred right to purchase the company's wares at same price as the latter. Thus stockholders (cotton-planters) would sell pork and cotton fabrics to "hands,"

and make or save money to both, and greatly help each other.

After a few years, with its immense capital, this association would dictate the prices of cotton to the whole world. It would tend to, and probably would, soon wrest the supremacy in cotton manufacture from England.

Buying cotton and hogs from stockholders only, if these furnished ample supplies of those; saving to stockholders profits made by middlemen; making no bad debts (for stock, as a *dernier ressort*, would secure payments due from stockholders), this association would be most intensely co-operative, and one of the most colossal and profitable partnerships in the world. Its vast capital would prevent the "bears" from fooling with cotton, or greatly tend to. Its receipts from bonuses or premiums would be great, and every community would be sympathetic with it as representing home investors. Where legislation does not exempt capital invested in manufactures (as is here and there the case), this association would compel such a thing by the constraints of interest as well as wisdom of policy.

The association would promote two of the most desirable industries for the South—cotton manufacture and pork-packing. It would enhance the value and size of hundreds of towns and cities in a few years, giving profitable employment to scores (hundreds) of thousands of the young who are now a burden in many instances. The company would be an immense factor in increasing the price of cotton; to decrease its acreage; to increase production of corn and hogs. It would be a grand and easy lesson in co-operation, and the South is particularly needful of instruction here. It is simple, easy, perfectly feasible, and a cheap way to greatness. It takes no great combinations—no large aggregations of capital. It runs next to no risk; can hardly (possibly) incur loss. It needs no cumbersome machinery of organization; no long time for waiting; no vast number wherewith to start. It is capable of the largest or smallest membership, immense or little capital. Its membership ought to be large in all the cotton States. It ought soon to number at least 100,000 members. If each member only subscribed \$1000 (the lowest amount for eligibility), there would be \$100,000,000, and 20 per cent. of this, payable in cotton by December 31, 1895, would make a fund of \$20,000,000 for cotton factories and pork packeries. But that is only a start. And in a few years its membership might be 1,000,000, and many, even at first, would subscribe far more than \$1000 each.

It is quite as easy to organize this as any large company. Its headquarters might be at New Orleans, or Jackson, Miss., or Montgomery, Ala., with branches in many places. It is a good invention to a complete, safe, magnificent and munificent revolution.

[While the foregoing plan is, in the opinion of the MANUFACTURERS' RECORD, wholly visionary and impracticable, it comes from a man who has given much study to Southern agricultural interests.—Ed.]

Action for Better Baling.

The reform in cotton-baling has made considerable progress at Galveston, Texas, where the Galveston Maritime Association has decided to take the following course of action in cotton shipments:

"All ocean freight quotations for export cotton in through bills of lading shall be made in cents per 100 pounds on the basis of cotton compressed to the required density, and the contracting road shall be liable to the ship for the cost of recompressing cotton not containing the required density, and by agreement the amount of the charge for recompressing shall be paid

to the ship if she receives the cotton as delivered; and the contracting roads shall declare to the Galveston Maritime Association on or before September 1, 1895, which course they agree to for the season of 1895-96.

"All freight engagements with the carrier for export cotton of lots less than 5000 bales shall be made on the understanding that the same shall be tendered for delivery at the ship's side, in Galveston, within twenty-five days (unless delayed by causes beyond the control of the railroads), and engagements for lots not less than 5000 bales may be made for future months, but such engagements must be delivered at ship's side in stated quantities and stated months, stipulated in the contract at time of engagement.

"The density of the cotton shall be ascertained on delivery of the same alongside the vessel, or as soon thereafter as practicable (not to exceed five days after receipt of the cotton), by inspectors appointed by the Galveston Maritime Association, which shall furnish condemnation certificates for all compressed cotton not containing the above density.

"All compressed bales of cotton, when tendered the vessel, shall be covered entirely, including sample holes, with good standard bagging, bound with not less than eight bands placed about equal distances apart, and if not in such good order receipt shall be given for the same accordingly. All such cotton shall be delivered to the vessel as far as possible in complete lots, as per bills of lading, and in accordance with marks thereon. Cotton not distinctly marked shall be refused by the vessel."

New Mills in Georgia and North Carolina.

Messrs. Thomas D. Stewart, J. W. Alexander and Wilson Pullen have determined to erect a cotton mill at McDonough, Ga., and work will soon be commenced on a \$50,000 plant.

The Chatham Manufacturing Co., of Elkin, N. C., manufacturers of jeans, hosiery, cassimeres and blankets, informs the MANUFACTURERS' RECORD that it has decided to erect a cotton mill of 5000 spindles. The building will be erected this season, but no machinery will be bought until next year.

The Collier Cotton Mills, of Hickory Grove, N. C., has applied for charter with J. N. McDill, Jas. W. Castels, W. J. Moorhead, John B. Martin and others as incorporators, with a capital stock of \$100,000. It is proposed to erect a mill at once, payments to be made for stock on the installment plan.

The new mill proposed at Rockingham, N. C., by R. L. Steele and members of his family will be located on Hitchcock's creek and operated by water-power. An equipment of 10,000 spindles and 500 looms is contemplated, and the dam to furnish water-power is already built. The plant will be operated under the name of Steele's Mill, for which incorporation papers have been filed. The incorporators are Robert L., Robert L., Jr., Thomas W., Thomas W., Jr., Walter F. L. and Stephen W. Steele.

A Wool-Scouring Mill in Texas.

Arrangements have been completed with capitalists from Galveston whereby Colorado City is to have a wool-scouring mill with a capacity of cleaning 2,500,000 pounds of wool annually. The machinery has been ordered and the plant will be in operation by May 10. Citizens of Colorado take a large share of the stock of the enterprise, and the Colorado City Wool-Scouring & Manufacturing Co., incorporated, has been organized with a capital stock of \$40,000 to operate the plant. Mr. W. T. Campbell, of Lampasas, Texas, is president; Sig. Simon, of Colorado City, vice-

president; W. T. Scott, of Colorado City, secretary-treasurer, and W. P. Prestridge, of San Angelo, Texas, manager. It is expected that the mill will be the means of bringing back to Colorado City a large share of the wool trade which formerly centred there, but has for the past four years been diverted to other points. It is the intention of the capitalists back of the scheme to buy all the wool offered along the Texas & Pacific Railroad as far west as Pecos, ship to Colorado City and scour and reship; or if the growers do not care to sell locally, the mill will scour their product at a stated rate per pound. It is said that there is no doubt that enough wool can be secured in the immediate territory to keep the mill running the entire year. Mr. W. T. Campbell, of Lampasas, Texas, president, can give any information desired.

Textile Notes.

A REPORT states that it is probable that a woolen mill will be built at Florence, Ala.

A NEW cotton mill is to be built at Huntsville, Ala., and Messrs. W. P. Newman and W. S. Wells are interested.

THE Cheraw (S. C.) Knitting Mill Co.'s plant is to employ thirty-five hands and produce from 125 to 150 dozen pairs of hose daily.

THE Wadesboro (N. C.) Cotton Mill Co. has ordered 1644 new spindles for its plant, which will make 6704 in all, producing two-ply yarn. The mill will probably operate day and night very soon.

MR. C. G. LATTI, president, and H. B. Greason, superintendent, of the Raleigh (N. C.) Cotton Mills, are now in Providence, R. I., to place orders for machinery for the company's new addition.

MESSRS. LEONARD LINCOLN and Andrew Lipscomb, of Fall River, Mass., contemplate engaging in the cotton-mill business in the South, and have been at Columbia, S. C., investigating during the week.

THE Massachusetts Cotton Mills, of Lowell, Mass., will at once commence work on its mill at Rome, Ga., and push it to completion. A plant will be established to contain not less than 30,000 spindles, and cost not less than \$600,000.

THE annual meeting of the stockholders of the Maginnis Cotton Mills will be held at their office in the mill building in New Orleans, La., on Tuesday, April 2, for the purpose of electing seven directors to serve this company during the ensuing year; C. B. Maginnis, secretary.

THE board of directors of the Cherry Cotton Mills, of Florence, Ala., held a meeting last week and declared a dividend of 3 per cent. A larger percentage was placed to the credit of the surplus. The plant is running day and night, employing about 250 hands, and large orders for goods are being received daily. One telegraphic order received last week called for 10,000 pounds of yarn.

THE Walhalla Cotton Mill, at Walhalla, S. C., is to be built at once and Mr. John D. Verner will receive proposals, it is stated, for building and furnishing apparatus complete for the plant, or for mill and machinery separate. The plant will consist of main building, two stories high, of brick, 200x65 feet, have iron roof, heavy floors and cement basement, building provided with fire sprinkler and roof tank; also one one-story engine-room, with brick smokestack seventy-five feet high, and one two-story brick office, with iron roof, oiled pine inside finish and blinds; factory to have one 175 horse-power engine and boiler, with transmission power belt to main building, which will be fitted with spindles, carders, bobbins, converters, cleaners and necessary machines for spindle mill. Steam heat and an electric-light plant may be installed; estimated cost \$85,000.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

The Market for Cottonseed Products.

NEW YORK, March 26.

Cottonseed-oil trading at this market is of a desultory character, and sales of large lots are the exception. Western needs at improved prices constitute the main features of the business at this writing. The situation has improved with regard to values, and symptoms of a still further advance are apparent. The mills generally are winding up their seed stocks, exclusive of those which have already closed down, the crushing season thus rapidly approaching a close. Considerable interest is evinced as to the proportion of oil held in mill tanks. A knowledge of the approximate amount, however, would scarcely influence the market in either direction, although it is rumored that the mills refrain from divulging the extent of their accumulations in their desire to avoid a weakening of prices. Although the proportion of oil manufactured this season exceeds that of previous ones, owing to the increased consumption and generally healthy trade conditions now developing, there is fair reason to predicate that but a limited quantity, if any, will be carried over until the appearance of the next seed crop. Compound-lard manufacture in the West is moving apace, and a fair volume of crude has been purchased for future delivery. Exports are yet light, England alone evincing a disposition to purchase, off-grade yellow being in request. At close of the week several tanks of crude were sold for local consumption at 18 cents, although 19 cents is the asking figure. Off-grade yellow to the extent of 700 barrels was sold for export on same date at 25½ cents, while several small lots for local consumption found purchasers at 25¼ cents. Prime yellow for spot lots is quoted at 26¼ cents, and for April delivery 26½ cents, at which latter terms 500 barrels have been sold. Barreled crude is yet a scarce commodity, the light receipts in the main being purchased to arrive here. It is reported that 350,000 gallons prime yellow have been purchased at the mills, to be delivered here in uniform quantities, on a 27-cent basis, the lot going to a local refiner, to be delivered in April and May. Several hundred barrels of low-grade yellow were disposed of at 24½ to 24¾ cents. White oil is on offer at 29 to 30 cents, with limited demand. The increased tariff recently imposed by Germany upon imported American refined cotton oil for edible purposes will undoubtedly have the effect of materially increasing imports of the crude and low-grade variety of refined, while even the prime grades will find entry into that country under old conditions when intended for other than edible purposes. Sales aggregating 100,000 gallons of off yellow at prices ranging from 25½ to 26 cents were effected, as to grade, and 150,000 prime yellow, exclusive of the large lot previously referred to, at from 25½ to 26½ cents, the lot sold at latter figure being for April delivery. Quotations are as follows: Crude, prime, 22½ to 23 cents; f. o. b. mills, 18 to 20 cents; crude, off quality, 20 to 21 cents; yellow summer, prime, 26 to 26½ cents; off grade, 25½ to 26 cents; white summer, 29 to 30 cents; yellow winter, 33 to 34 cents; white winter, 35 to 37 cents.

Cake and Meal.—Values have a higher tendency and the demand for export is improving. To meet the views of the English consumer, and to secure a better price at several of the leading mills, the hard cake is removed from the soft variety, the latter only being packed in bags as special consignments. At a lower cost per ton, and not infrequently to the extent of 10/

the hard cake is disposed of. The latter is largely ground to meal, and either used for home consumption or shipped to Germany, which latter country prefers the product in the reduced form. New Orleans quotations, \$17.50 to \$18 per ton. Receipts at this market aggregate 350 tons meal, and 200 at Boston.

A MOVEMENT is on foot in Columbus, Ga., to organize another company for the purpose of building a new cottonseed-oil mill. The stock in the new company is said to be going on well.

GENERAL NOTES.

Brief Mention of Various Matters of Current Interest.

A COMPANY has been formed to conduct a new daily paper at Birmingham, Ala. It is to be called the State. The MANUFACTURERS' RECORD trusts that it will be an important factor in the development of that section of the South.

THE steamship Saturn, the first of a line intended to run regularly between Charleston, S. C., and European ports, has arrived at Charleston with 5554 barrels of cement, said to be the largest cargo ever imported. She will load cotton for Bremen.

THE report of Inspector of Mines Norwood for Kentucky shows that the output of coal for 1894 amounted to 2,955,670 tons, a decrease of 349,580 tons as compared with 1893. This decrease was largely due to the long strike in part of Kentucky.

CONSIDERABLE interest is manifested in Charleston, S. C., as to whether rice can be profitably shipped in bags instead of in barrels, as at present. The News and Courier has been interviewing a number of rice people, and some of them favor the use of bags, while others prefer to adhere to barrels.

THE South Baltimore Business Men's Association of Baltimore has elected the following officers: President, George B. Skinner; first vice-president, Capt. W. C. Eliason; second vice-president, Daniel T. Orem; recording secretary, Henry J. Broening; financial secretary, William Bone; treasurer, Joseph B. Harig.

A DISPATCH from Louisville states that Mr. W. T. Rolph, of Dun's Commercial Agency, has received notification of the reorganization of the American Association, Limited, under the title of the American Association, Incorporated. It is said that the new company will have a capital stock of \$1,000,000, and that it will issue \$250,000 first-mortgage bonds and \$1,500,000 second-mortgage bonds. If this report be true, it will probably be of considerable importance to the industrial interests of the Middlesborough section of Kentucky.

Shrewd Move by the Carnegie Company

The Carnegie Steel Co. has bought about 85,000 tons of Bessemer pig iron at the lowest prices on record, and a stock of 250,000 tons of coke, also at the lowest cost. The H. C. Frick Coke Co., representing the same interests, has forced a general advance in wages in the Connellsville region, thereby increasing the cost of coke to makers of pig iron and necessitating an advance in crude iron. This is understood to foreshadow an advance of not less than fifty cents a ton in the price of pig iron.

Another Great Salt Bed.

A dispatch from New Iberia, La., states that a bed of salt has been found on Jefferson's Island, which has been penetrated 300 feet by the drill without finding its bottom. The island is owned by Joseph Jefferson, the actor, and is in the vicinity of Avery's Island, where very extensive deposits of salt are being worked.

PHOSPHATES.

Phosphate Markets.

OFFICE MANUFACTURERS' RECORD, BALTIMORE, March 28.

The volume of trade in phosphate has been light, with little or no inquiry during the past week. Manufacturers of fertilizers are fairly well stocked up at present, and are only purchasing as necessities require. In Florida and South Carolina the industry is picking up considerably, and shipments from the ports are much better. At points of production there is a good development in progress, and, with a good foreign demand now ruling, business is improving. The market closes steady at previous quotations. South Carolina rock is \$3.25 for crude, \$3.75 to \$4.00 for hot-air-dried and \$6.50 for ground rock, all f. o. b. Charleston. Florida rock is quoted \$3.25 to \$3.50 for river pebble and \$4.65 to \$4.75 for land rock, all f. o. b. Tampa or Punta Gorda. Among the arrivals are noted the schooner W. M. Bird, from Tampa, with 1200 tons of rock, and the schooner Falmouth, sixteen days from Navassa Island, with a full cargo of phosphate. The only charter reported during the week is the schooner Douglas Gregory, Ashley river, S. C., to Baltimore. In New York freights are dull, with few phosphate charters reported. During the past week a bark, 557 tons, from Tampa to Cartaret, N. J., was taken at \$2.25, and two schooners, Charleston, S. C., to Philadelphia with phosphate rock, at \$2, coal out at 80 cents.

FERTILIZER INGREDIENTS.

A quiet tone has prevailed in the general market during the past week, and little business has been recorded in the local market. Manufacturers are fairly well stocked up at the moment, and are not purchasing in large quantities. Stocks of blood and tankage in the West are ample for the present demand, and prices are unchanged. The market for bone meal and fish scrap is dull and without any special feature. Nitrate of soda is somewhat depressed on account of heavy stocks and free offerings.

The following table represents the prices current at this date:

Sulphate of ammonia, gas.....	3 25@	\$3 30
Sulphate of ammonia, bone.....	3 20@	—
Nitrate of soda.....	1 75@	—
Hooft meal.....	1 80@	—
Blood.....	1 80@	1 95
Azotine (beef).....	1 80@	—
Azotine (pork).....	1 80@	—
Tankage (concentrated).....	1 60@	—
Tankage (9 and 20).....	1 60 and 10	—
Tankage (7 and 30).....	17 00@	17 50
Fish (dry).....	22 00@	23 00
Fish (acid).....	15 00@	15 50

CHARLESTON, S. C., March 25.

The phosphate market is dull, with a small volume of trade, both local and coastwise. Fertilizer shipments are lasting pretty well, and considerable movement is noted. Trade to European points holds out very well, and the river companies are actively mining. Prices are \$3.50 for crude, \$3.75 to \$4 for hot-air-dried and \$7 for ground rock, all f. o. b. Charleston. The shipments by water were T. W. Dunn, 800 tons for Weymouth; G. R. Congdon, 650 tons for New York; while in port and loading are the Elmira, E. L. Cottingham, E. G. Hight, A. C. Grace, M. J. Lawrence. The shipments since September 1 were 47,766 tons crude and 1365 tons ground rock, against 63,566 tons crude and 300 tons ground rock for same date last year.

Phosphate and Fertilizer Notes.

A DISPATCH from Columbia, S. C., states that the phosphate tax is coming in much better than was expected. Up to the 25th inst. about \$23,000 had been received for tags. This indicates a decided improvement in the phosphate movement.

A NEW YORK daily states that Mr. Fred. Lewis, vice-president of the National Manufacturers' Association of the United States for the State of Florida, is now arranging

to equip the Union Phosphate Co.'s plant in Polk county, Fla., which will embody the first application of electricity to phosphate-mining.

A SPECIAL from Raleigh, N. C., states that the report of the State agricultural department on the 18th inst. showed that for the season ending the same date last year the receipts from sales of fertilizer-tax tags were \$21,000, and this season, up to the 18th inst., they are only \$13,000, thus showing a heavy falling off in fertilizer sales this season.

THE shipments of phosphate rock from the port of Charleston, S. C., for the week ending the 22d inst. were 915 tons per schooner T. W. Dunn, and 820 tons of acid phosphate, both for Weymouth, Mass. The total shipments to coastwise ports since September 1 amount to 47,766 tons of crude rock and 1365 tons of ground rock. For the corresponding period in 1893 94 the shipments aggregated 63,566 tons of crude and 300 tons of ground.

A SPECIAL from Chestertown, Md., states that Mr. Thomas Hill, of Baltimore, who owns some fine farming lands in Kent county, is contemplating an extensive agricultural enterprise. He has discovered extensive marl beds on one of his farms, and proposes to put in improved steam apparatus to get out the marl, which is supposed to be fifty feet in thickness. It is proposed to build a railroad to carry the marl to navigable water. To do this two miles of road will be required, terminating at a landing near Edesville.

THE phosphate shipments of the port of Fernandina, Fla., are better for the present month than for some time past, as the markets in Europe have been heavily stocked, and the demand has been light. The coastwise business in phosphate has also been of small proportions since last October, and while the fertilizer business is somewhat deranged, manufacturers are not purchasing freely. The general shipping business of Fernandina for the current month shows quite an improvement, especially in phosphate, and while not as large as expected, will amount to about 20,000 tons, distributed as follows: March 9—British steamship Saint Oswald for Hamburg with 2409 tons by the French Phosphate Co.; 15th—British steamship Petunia for London, England, with 2100 tons by the French Phosphate Co.; 18th—British steamship Rosetti for Cork and Dublin, Ireland, with 2500 tons by the Dunnellon Phosphate Co.; 20th—British steamship Norlands for Rotterdam, Holland, with 2250 tons by the Anglo-Continental Guano Works; 22d—British steamship Lowlands with 2200 tons for Hamburg, Germany, by B. Arentz & Co. The British steamship Macedonia consigned to the Dunnellon Phosphate Co. for 2200 tons, the Cundall to A. Talheim for 2500 tons and the Ripon City to Alb. Newman for 2800 tons, are due to arrive this week. All the available track room of the Florida Central & Peninsular Railroad and space for storage in its elevator has been taken for some time. Several hundred cars loaded with phosphate rock are now in its yard awaiting the arrival of vessels to relieve them.

Big Improvements in Washington.

A company known as the Woodley Land Co. has been organized under the laws of Virginia to operate in real estate in Washington with a capital stock of \$7,000,000. Hon. J. J. Hemphill is president, and among those interested in it are Mr. Alex. S. Porter, president of the Real Estate Exchange of Boston; E. Rollins Morse, of J. P. Morgan & Co., of New York, and Chas. S. Miller, of Boston. It is reported that this company has purchased 400 acres of land adjoining Washington, and that it will make very extensive improvements, including a \$250,000 bridge, build streets, secure electric lights, water works, etc.

MECHANICAL.

Pumping Engines of Napoleon, Ohio.

The pumping engines recently built for the Napoleon (Ohio) water works by the

where the exhaust steam from the engines is condensed, the water of condensation being drawn off by a crank and fly-wheel air pump and delivered to the hot well. From the hot well it is supplied to the boilers, passing through a Stilwell close

One of the more important uses to which this invention may be devoted is the better protection of life and property from fire. When in a burning building the seat of destructive action is once reached by firemen, a funnel-shaped torrent, opening out

greater. The compact and powerful stream ejected from the old-fashioned nozzle would not begin to cover the same area, and when moved to and fro across the front of the edifice it would break in the windows, force its way in through openings and deluge property in a most appalling way, to say nothing of making no end of trouble for the occupants. But the shower of rain from a ball nozzle, covering an expanse forty, fifty or sixty feet in diameter, would reach the whole surface at once, and yet without smashing a single pane.

Still another striking merit of the new device is that it does away with "back pressure." The bell-shaped outlet gets rid of this difficulty, so that one man can handle the pipe with ease. This, of course, is a great gain in any situation. But it is of exceptional value when a fireman wishes to invade a burning tenement or hotel, or even an unoccupied building.

To use in hotels, steamships, theatres, factories and other large buildings provided with their own fire extinguishers, the ball nozzle is quite as well adapted as to municipal fire service, and in both these directions it will doubtless find extensive usefulness. For such work the nozzle is provided also with a short tapering tubular outlet, so that one may have either the solid jet or the scattering funnel at will, but not both at once. Another form of the nozzle, though, is intended to be set up permanently on a standpipe. In fact, several of them may be connected with one source of supply, so that the opening of a single valve will put them all in operation. This plan would prove valuable not only in interiors, but also out in railway freight-yards and lumber-yards, where protection

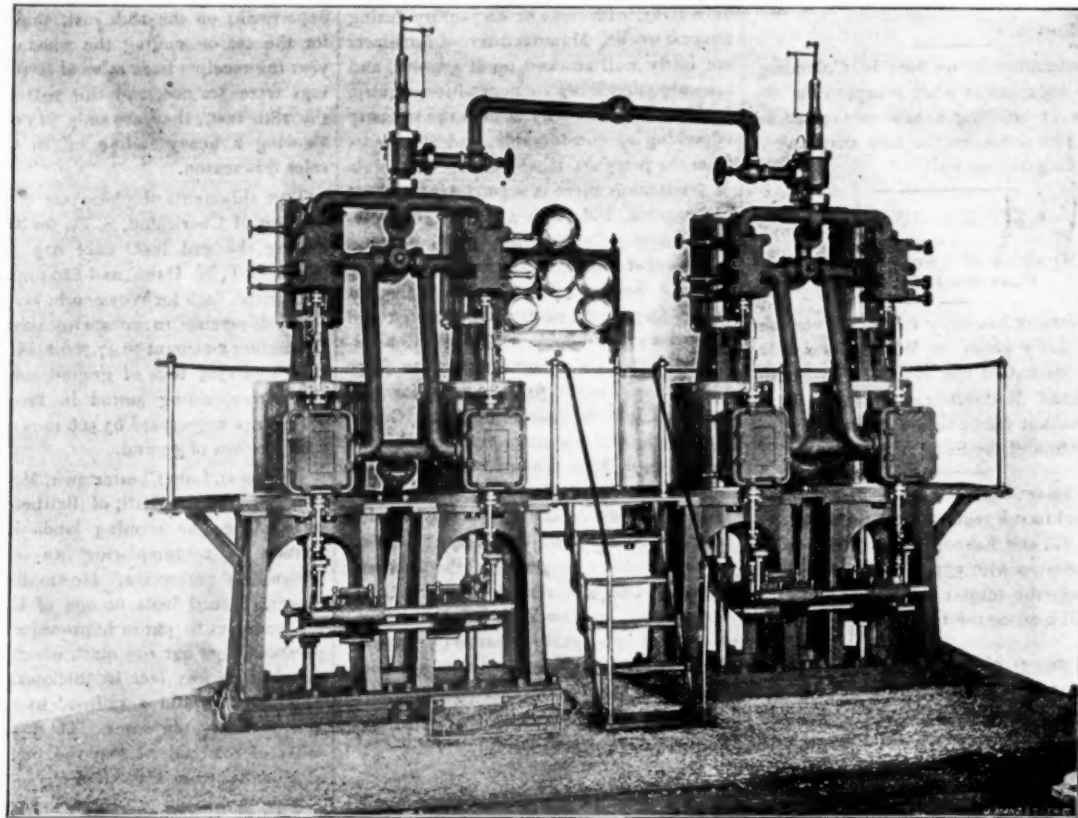


FIG. 1.

Stilwell-Bierce & Smith-Vaile Co., of Dayton, Ohio, possess many points in construction that will interest engineers and those associated with or concerned in the operation of pumping plants. Excellent views of them are given by the accompanying cuts, which were made from photographs.

The engines, as the illustrations show, are of the deep well type. The steam end stands on the floor of the engine-room, while the water end rests in the bottom of the pit eighteen feet below, both ends being connected together by substantial cast-iron framing well braced. The steam end of each pump consists of a compound condensing duplex direct-acting engine, the base of which rests on heavy wrought-iron I beams spanning the mouth of the pit and firmly embedded in the masonry of the building. Substantial housings carry the high and low-pressure cylinders, and the whole is so designed that the steam pistons are readily accessible for inspection or repairs by simply removing the heads of each cylinder.

The slide valves are balanced, and steam connections are made so that steam at boiler pressure can be turned directly into the low-pressure cylinders by operating a single valve, thus giving a fire pressure in the mains at a moment's notice. The steam cylinders are lagged with mahogany, and all the working parts are polished.

The water end of each engine is of the differential plunger pattern, and the diameters of the plungers are so proportioned that the work done on the down stroke of the engine is greater than that done on the up stroke by the amount due to the weight of the moving parts, thus equalizing the work of the engine on the up and down strokes. The plungers are outside packed, so that any leakage may be readily detected and the packing adjusted while the pump is in operation. The valve area is amply large, and the valves easily accessible through convenient hand-holes.

The rods connecting the steam pistons and water plungers pass through suitable guides in the framing, thus overcoming any possible tendency of the rods to spring when the engines are in operation.

The water discharged from the pumps passes through a Wheeler condenser,

heater on its way. Suitable provision is also made for turning the exhaust steam into the air in case repairs should be required in the condenser.

The dimensions of these pumping engines are as follows: High-pressure steam cylinders, ten inches diameter; low-pressure steam cylinders, eighteen inches diameter; water plungers, eleven and a-quarter and eleven and a-half inches diameter; length of stroke, eighteen inches. Their capacity is 1,000,000 gallons per twenty-four hours each, with a domestic pressure of sixty-five pounds and a fire pressure of 125 pounds.

The entire construction of these engines is of the most substantial character, and affords a creditable example of the class of work turned out by this company.

The Ball Nozzle.

An exhibition of a simple device was recently opened in New York city that proved a continual source of wonder and surprise. It is a new fire-fighter, and the remarkable results shown have deeply interested fire-department officials, insurance and business men. This new device accomplishes its remarkable results by a change in the construction of the ordinary nozzle of the fire-hose.

In a bell-shaped nozzle is placed loosely a round metal ball, the effect of which is to break up the solid stream as it issues from the nozzle into a wide and powerful and heavy sheet of water.

A defect of even the most powerful streams of water as thrown by most improved engines is the concentration of the delivery, so to speak. The ball nozzle renders it possible to make the delivery of the water as universal and all-embracing as the flames themselves. From a single hose issues a sheet of water sixty feet in radius. This invention was originated and patented by a Des Moines (Iowa) man named Charles V. Pollock. He came upon it almost by accident while experimenting with an ordinary lawn-sprinkler. He found that a ball placed loosely in a bell-shaped nozzle, without anything to hold it in position, would resist all pressure of water and create a powerful spray.

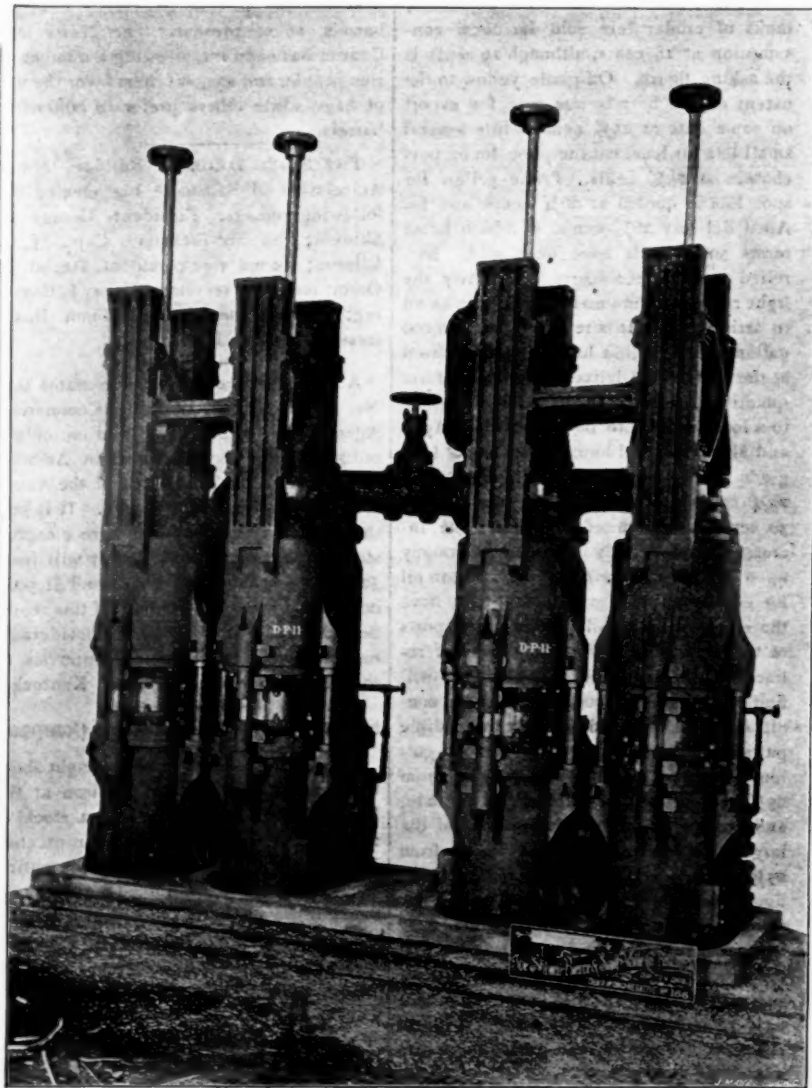


FIG. 2.

at an angle of fifty-five degrees, would often be more effective than a solid stream, especially if the exact source of the flames be concealed by a veil of smoke, and that is what the ball nozzle gives. But in protecting an adjoining building in such an emergency the advantage would be still

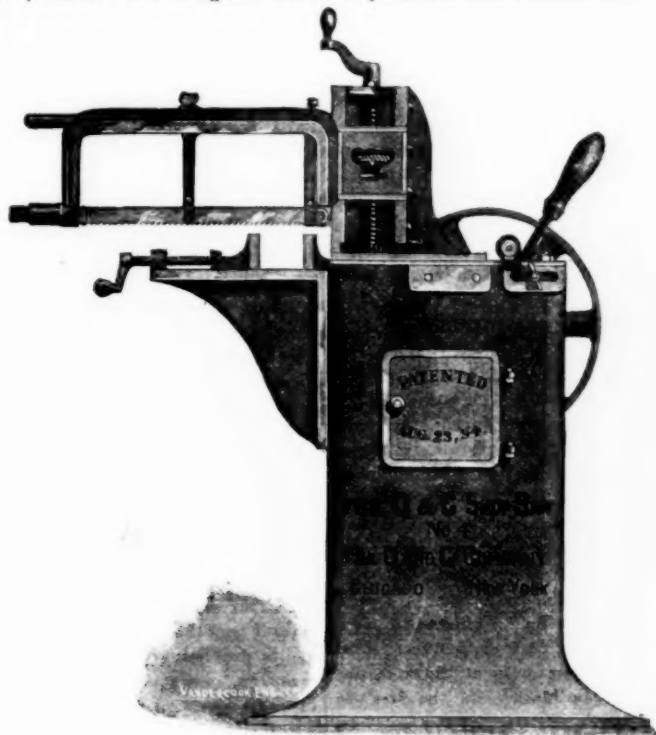
could be extended over a wide area instantaneously by a man working at a safe distance from the scene of trouble. In such cases it is proposed to erect the standpipes about 100 feet apart. Opportunities for wide application of this device in irrigating land are also pointed out. The American

Ball Nozzle Co., 837 Broadway, New York city, is the sole manufacturer of this device.

Q. & C. Shop Saw No. 4.

The great interest shown in the Q. & C. shop saw lately placed upon the market has led to many inquiries for a machine of larger capacity. To satisfy this demand, the No. 4 machine was designed, and is

tained, the blade, it is stated, does not drag back on work, resulting in a great saving in blades. It is belted direct to main shaft if desired, and easily moved about the shop if necessary. The power can be thrown on or off instantly. It has a variable automatic feed which is changeable from fast to slow without stopping. The machine requires but little attention when in opera-



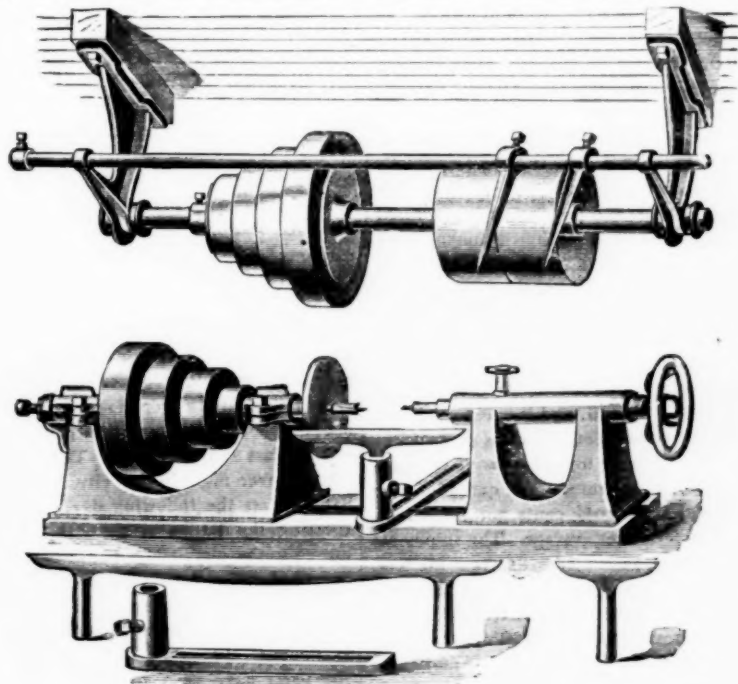
THE Q. & C. SHOP SAW NO. 4.

now ready for the market. It is shown in the accompanying illustration. This machine is constructed similar to an ordinary shaper, and leaves the end of the work true and smooth, ready to receive the lathe centres, thus, it is explained, rendering the use of an expensive cutting-off machine unnecessary. It is furnished with the Q. & C. shop-saw automatic feed, of range from one-three-thousandths of an inch to any amount desired, which is considered a very desirable tool for manufacturers of

tion. It is manufactured by the Q. & C. Co., of Chicago, Ill.

Improved Wood-Turning Lathe.

Some desirable improvements have lately been embodied in the wood-turning lathes made by Cordesman, Meyer & Co., of Cincinnati, Ohio. In the illustration herewith is shown one of these improved machines. They are made in three sizes, viz, 12-inch, 16-inch and 20-inch swing. The spindles are made of steel forgings turned true.



IMPROVED WOOD-TURNING LATHE.

shafting, architectural metal and foundries. This machine has a capacity for straight cutting up to 8x8 inches square, and mitre cuts up to four inches. A great range of feed is obtained, and the simplicity of the machine, which is easily operated by unskilled help, makes it a desirable tool for any machine shop.

It is provided with a double saw guide to prevent the saw from "running." A perfectly horizontal stroke being main-

The cone pulleys have four speeds and are made of segments of wood securely pinned and glued together. Preference is given to wood cones to lessen the slipping of the belt, and because of lightness. With each lathe complete countershaft, face-plates, plain and spur centres, rests and sockets are furnished. The countershafts are fitted with wood cones, loose and tight pulleys, hangers and shifter. The loose and tight pulleys on the 12-inch lathe are 6x3½; on

the 16-inch, 8x4½, and on the 20-inch, 10x4½. They should make from 450 to 700 revolutions per minute, according to the work to be done. A lathe for pattern-makers' use, with left-hand thread at the rear end of the spindle for extra face-plate, is also made by this concern.

A Folding Barrow.

The wheelbarrows made by the Kilbourne & Jacobs Manufacturing Co., of Columbus, Ohio, are being highly spoken of for durability. This company manufactures a great variety of these barrows, each style being designed for a special use. A cut on this page shows the folding garden or farm barrow. It has the Jacobs patent wheel, which is constructed to com-

four inches long, makes a liberal allowance for large and small saws.

A feature to which particular attention is called is the reversible guide, which can be used for either a right or left-hand mill. The manufacturer of this guide is the Ridgway Manufacturing Co., of Ridgway, Pa.

Electricity in Shoe Factories.

An interesting electrical-power-transmission plant is in process of installation by the General Electric Co. at Rochester, N. H., for the operation of Messrs. E. G. & E. Wallace's shoe factories.

The system adopted is the three-phase system devised by the General Electric Co. It is on this system that many important power-transmission plants in this country



FOLDING BARROW.

bine great strength with lightness. The spokes, ten in number, are of highly-seasoned wood, and each spoke is supplied with a separate felloe. This barrow has a double frame, firmly bolted, iron braced, and so put together that by simply removing one bolt (the axle) and two nuts it can be folded flat down for shipment. The advantage of this feature can be readily seen when the ease and economy which it permits in transporting these barrows from place to place is considered.

The Carman Saw Guide.

A device which is being widely used and endorsed by Pennsylvania and Northern lumbermen is the Carman patent improved reversible saw guide, which is illustrated herewith. The utility of this device will be seen by intelligent millmen on examination of its principal features. Some of these are described as follows: In the outer jaw nearest the carriage the plug is stationary, and being entirely within the jaw, there is no projection for anything to

are now being operated, owing to the economy found in operation.

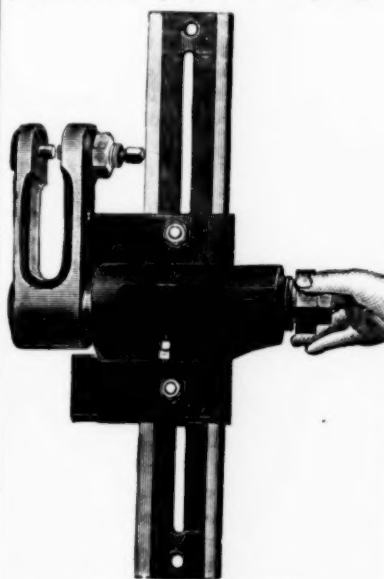
The source of power in this case is steam, the fuel being the scrap bark, the refuse from the tanneries located on the ground. The generator will be a 140-kilowatt or about 190 horse-power machine wound for 560 volts, as the distance of transmission is insignificant. The motors will be of the induction type without commutators or moving wires, and will be operated without the use of transformers. These motors will be 500-volt machines of five horse-power, fifteen horse-power, twenty horse power and twenty-five horse-power capacities. Another generator to be used principally for lighting will shortly be added.

The installation of this plant was determined upon after a careful examination of the merits of the three-phase system and the economy likely to be obtained by its adoption when compared to the cost of installation and maintenance of a system of mechanical distribution of power. Messrs. E. G. & E. Wallace had already experimented with motors in the operation of their shoe factory, and the great economical and other benefits which accrued proved the deciding factor, which resulted in the present installation.

Factories Wanted.

The Stuttgart & Arkansas River Railroad isn't much of a road in the matter of mileage, but it is the biggest kind of a road in energy and progressiveness. Running from Stuttgart to Gillett, a distance of about forty miles, through a rich prairie farming and fruit country, well watered and well timbered, it is devoting itself to the development and building up of its territory. The company controls a large area of farm lands, which it sells at low prices, and it owns also a good many thousands of acres of magnificent hardwood timber—oak (several varieties), cypress, pecan, hickory, ash, cottonwood. This timber is floated to Gillett, and the company has planned to build up at that point a manufacturing interest. Great inducements are offered for the establishment of woodworking plants. The conditions are said to be specially favorable for the following, some of which are urgently needed: Car works, machine shop, furniture factory, wagon factory, agricultural-implement works, handle and spoke factory, dry barrel factory, cottonseed-oil mill, mattress factory, ice factory, cotton mill. Mr. T. H. Leslie is vice-president and general manager of the road, with headquarters at Gillett, Ark.

A SAVANNAH (Ga.) dispatch states that an export trade with England is being developed in rice, and a large quantity has been ordered this year.



THE CARMAN SAW GUIDE.

catch upon; in the inner jaw is an adjustable plug, which is secured by a jam nut; the thickness of saw is taken while it is standing idle; the saw is then guided, while under motion, in or out, as shown in cut, by a nut fourteen inches from the saw, and not endangering the sawyer; the saw can be adjusted the smallest fraction of an inch in a moment or while the carriage is running back; in changing saws the jaws are thrown back, which does not destroy the adjustment, thus saving a great deal of time; the slot in the base being twenty-

During the past week no new features of interest have characterized the general lumber market. The demand for lumber and timber continues uninterrupted, and while the volume of business is not expanding, shipments continue regular. Rail and water shipments both continue of moderate proportions, but prices stand at bottom

figures. The mills here are all hard at work, with a full stock of logs and a very complete assortment of yard supplies. Stocks of air-dried lumber are not large, but stocks are generally in exceptionally good condition. All of the mills are well supplied, and are generally prompt in executing orders for such sizes and dimensions as are usually required for the retail trade. Both of the shingle mills here have timber to run them until June, and they keep well sold up to the capacity of their cut. Prices are not up to the mark, considering the scarcity of cypress timber, but they are, however, better than for the corresponding period last year. A new and important industry on the Sabine river is just being inaugurated by Mr. W. L. Pardin, of Moss Point, Miss. He has secured a contract for a large number of ship spars and masts to be shipped to Liverpool, England. He finds the long timber on the Sabine straighter and less disposed to twists than that of the forests he has lately worked. The facilities for getting them out and shipping are much better, the distance from the forest where they are cut to the ship's side being about 100 miles by waterway. The contract calls for the delivery of first cargo of 600 spars on the first day of October of current year.

St. Louis.

[From our own Correspondent.]

St. Louis, March 25.

The week under review shows considerable improvement in the volume of business in almost every branch of the lumber industry. The inclement weather prevailing has restricted operations to some extent, but advices from all outlying districts show that the demand is regular and gradually increasing. From the North and East the inquiry is improving, and a number of orders are coming forward from industrial plants, such as furniture factories and other woodworking concerns. Wholesale dealers in yellow pine, cypress, white pine and the hardwoods generally are well satisfied with the outlook at the moment. The local demand from yardmen has been very active during the past week, and retailers are looking forward to a good trade during the spring and summer months. A meeting of the local manufacturers of sash, doors and blinds was held last week, when it was decided to still further advance prices. An advance was made on the 1st inst. of 5 per cent., and the new price-list will show a further advance of 5 per cent. on doors and 10 per cent. on blinds, with no change in moldings. Factories are now running about two-thirds capacity, as orders are, so far, rather light, but stocks are generally in good shape for a spring trade. From all present indications there will be more building this season than usual, and permits are increasing in numbers each week, while foundations are being prepared for hundreds of structures in the west end and other resident sections of the city. A number of plans are in the architects' hands for factories, stores, warehouses, etc., and a number of large building projects are already under construction. There is a free movement in white pine, and yards are all generally busy with country orders, while the city demand is active. Prices hold very firm for desirable stuff and stocks move freely at prices quoted. Stocks are not excessive, but are fairly well assorted, and the opening up of the river will soon give more liberal receipts.

Southern Lumber Notes.

THE Boyden & Wyman Lumber Co., of St. Louis, Mo., has been succeeded by the McLeod Lumber Co., incorporated with an authorized capital stock of \$25,000, all of which is paid in.

MESSRS. WILLIAM CARLISLE and S. H. Fullerton, prominent mill and lumber men of Atchinson, Kans., were at Logansport, La., on the 19th inst. inspecting the saw

mills of the Sabine Lumber Co. with a view to purchasing the plant.

THE planing mill of the Red River Lumber Co., situated at New Lewisville, Ark., was totally destroyed by fire on the 16th inst. The loss is estimated at \$8,000 and insured for \$20,000.

MR. WILLIAM GOETCHY, of Brunswick, Ga., has leased the plant of the Amelia River Packing Co. at Fernandina from Wm. P. Wheelwright & Co., and will start up a shingle mill there.

THE mills of the Simpson Mill Co., of Bagdad, Fla., are now running on full time. The combined capacity is 125,000 feet per day. The company owns 200,000 acres of standing pine.

The recent heavy rains in Alabama have caused the Tombigbee, Warrior, Alabama and Coosa rivers to rise rapidly, and it is expected that cypress men will be enabled to get a full stock of logs.

THE shipments of lumber from the port of Fernandina for March will amount to more than 3,000,000 feet, mostly to domestic ports, nearly all being shipped by Robinson & Booth, of New York.

A SPECIAL from New Orleans states that the Kearns box factory and cooage works in that city was destroyed by fire on the 20th inst. The loss is estimated at about \$20,000; partially insured.

THE Standard-Eagle Box Co., of St. Louis, has purchased the saw mill of the Schutte Lumber Co., formerly owned by the Moline Lumber Co., at Helena, Ark., where it will saw hardwood and cottonwood.

THE Lone Pine Lumber Co., near Haasville, La., is now putting in a stove-factory plant with capacity for cutting staves, headings and hoops for 1000 barrels per day. Part of the machinery has arrived and is being placed in position.

THE local manufacturers of sash, doors and blinds in St. Louis held a meeting last week and advanced prices. There was an advance on March 1 of 5 per cent., and the new list will show a still further advance of 5 per cent. on doors and 10 per cent. on blinds, with no change on moldings.

A. J. RAE, Scott Wilson, D. G. Burrow, W. H. Armstrong, L. P. Manefee and Willard Burton, representing the lumber interests of Fort Worth, Texas, met on the 21st inst. in that city and inaugurated the work looking to the entertainment of the reunion of State lumbermen to convene on April 9. A committee was appointed to arrange the official local programme.

MR. C. L. BUCKI, of Jacksonville, Fla., returned last week from New York, and it is stated that he will soon commence to increase the capacity of his lumber mills at Fairfield. The planing department is to be enlarged and electric lights will be introduced, so that work can be done day and night. By these improvements the output of the plant will be doubled.

OWING to the dullness in the foreign lumber markets and the prevailing low prices, the Seminole mill at Millview, Fla., nine miles west of Pensacola, has been closed for the summer. This mill has a daily capacity of 150,000 feet, and belongs to the Southern States Land & Timber Co., an English corporation. It is reported that its other large mills at the same point will be closed soon.

A TIMBER sale of some magnitude was recently consummated at Winfield, Ark. The parties to the sale were Col. J. T. Bowyer and Capt. James B. Dudding, administrators, who have secured a contract to furnish upwards of 1,000,000 feet of sawed lumber to locks 9 and 10, below Winfield. The timber tract comprises about 400 acres, for which a consideration of \$5000 was paid.

THE Loomis-Hart Manufacturing Co., of Chattanooga, Tenn., is working a full force of men at present on account of the large

number of logs the company has on hand. About 2,000,000 feet of logs are now lying at the rear of the mill, and the indications are that 3,000,000 feet more will arrive before April 1. The mill has a capacity of 50,000 feet per day, and will be kept busy sawing for some time to come.

A MEETING was held at Kauffman, Texas, on the 19th inst. for the purpose of organizing a heading and stove-manufacturing company. The amount required for completing the plant was readily subscribed, and the work is to be commenced at once. The new company will be known as the Kauffman Manufacturing Co., and will manufacture all kinds of woodenware. The company will put in an electric-light plant.

THE shipments of lumber and timber from the port of Darien, Ga., are quite large for the present month, and the general situation in lumber and timber very satisfactory. Among the vessels cleared last week are the schooner Frances for Halifax, N. S., with 175,157 feet of sawn timber, and the bark Florella for Queenstown for orders with 646,929 feet of sawn timber and 19,546 feet of deals. Messrs. Hunter, Benn & Co. cleared the British bark Innerwick for Sunderland, England, with 166,831 feet of hewn timber, 653,728 feet of sawn timber and 34,463 feet of deals.

Iron Markets.

CINCINNATI, March 23.

The improved demand for iron continues, and being entirely void of any speculative features, it would seem to indicate that there is a larger melt throughout the country than for many months past. The volume of business for the week just closed may be correctly described as large. It compares favorably, indeed, with corresponding months of the heavy years of 1890 and 1892. The surprising thing is, that with all the buying there is scarcely a sign visible of betterment in prices. The eagerness to sell is as great as ever, and the market is at the very bottom in all forms of crude iron. This indicates a fear that the improvement in demand is but a temporary spurt, to be followed by a lull later on. Whether this will be the case, one man can foretell quite as well as another. It is noteworthy, however, that the underlying conditions are all a little more favorable, and that the sentiment of some of the most far-sighted men at the great centres, New York and Chicago, is more bullish than it has yet been.

One very significant feature is the hardening of money rates, showing larger demand in all parts of the country. This was ascribed at first to the large amounts of money required to pay for the portion of the recent bond issue which remained on this side of the Atlantic. Later events, however, would prove that the hardening of rates is due to a genuine improvement in the demand for money from the mercantile and manufacturing interests, and that the funds are needed for increased pay-rolls and enlarged operations. The surface indications have not seemed to confirm this view, but a continuance of the demand from the same sources is at least significant.

We quote for cash f. o. b. Cincinnati:

Southern coke No. 1 foundry.....	\$ 9 50@10 00
South. coke No. 2 (dry) and No. 1 soft.....	9 00@ 9 25
Hanging Rock coke No. 1.....	11 50@ 12 00
Hanging Rock charcoal No. 1.....	15 00@ 16 50
Tennessee charcoal No. 1.....	13 00@ 14 00
Jackson county stone coal No. 1.....	14 00@ 14 50
Southern coke, gray forge.....	8 25@ 8 50
Southern coke, mottled.....	8 00@ 8 25
Standard Alabama car-wheel.....	15 00@ 16 00
Tennessee car-wheel.....	14 50@ 15 00
Lake Superior car-wheel.....	13 50@ 14 00

BOSTON, March 23.

In a recent issue of one of our Boston daily papers we are informed that the wages of the coke workers will be advanced about 15 per cent. April 1. We presume this means a corresponding advance in the price of this material at the same time, and if so, it ought to influence the price of Western pig iron. The coke ovens increasing wages would also have a tendency to create a dis-

satisfied feeling among the miners of ore, as well as other laborers connected with the iron industry, and such being the case, we should naturally look for more strikes, and finally a general advance in wages among the furnaces and iron and steel mills, which would tend to further increase the price of pig iron.

We quote for cash delivered Boston:

Alabama No. 1 foundry.....	\$12 00@12 25
Alabama No. 2 (dry) and No. 1 soft.....	11 50@ 11 75
Alabama No. 3 (dry) and No. 2 soft.....	11 00@ 11 25
Alabama No. C. C. car-wheel.....	18 50@ 19 00
Strong L. S. coke iron No. 1 foundry.....	13 75@ 14 00
Lake Superior charcoal car-wheel.....	16 50@ 17 00
American-Scotch (Northern) No. 1.....	13 75@ 15 00
Jackson county silvery No. 1.....	17 00@ 17 50

PHILADELPHIA, March 23.

So far this month there has been a large increase in sales and shipments of pig iron and coke. Prices in Pittsburg are on a higher plane by at least 25 cents per ton. This would seem insignificant in ordinary times, but in these degenerate days it means a veritable boom. The heavy shipments of coke have been caused by the threatened miners' strike or fear that price would be advanced unless the operators conceded the demands of their men. The men's wages have been advanced and coke will have to be sold at more remunerative figures. We think the same condition of things will apply to the ore men, and eventually we expect to see business done on a paying basis.

We quote for cash f. o. b. Philadelphia docks:

Standard Alabama No. 1 X.....	\$11 25@11 50
Standard Alabama No. 2 X.....	10 50@ 10 75
Strong lake ore coke iron No. 1 X.....	12 25@ 12 75
Strong lake ore coke iron No. 2 X.....	11 75@ 12 25
Lake Superior charcoal.....	14 75@ 15 25
Standard Alabama C. C. W.....	16 75@ 17 25

We quote for cash f. o. b. St. Louis:

Southern coke No. 1.....	\$10 25@10 50
Southern coke No. 2.....	9 75@ 10 00
Southern coke No. 3.....	9 25@ 9 50
Southern gray forge.....	9 00@ 9 25
Southern charcoal No. 1.....	14 00@ 14 50
Missouri charcoal No. 1.....	12 50@ 13 00
Ohio softeners.....	14 00@ 14 50
Lake Superior car-wheel.....	15 50@ 16 00
Southern car-wheel.....	16 00@ 16 50
Genuine Connellsville coke.....	4 40
West Virginia coke.....	4 40

ROGERS, BROWN & CO

Star and Crescent Furnace Property.

The facilities for iron-manufacturing in Cherokee county, Texas, have attracted considerable notice to that section of the State. Between Rusk and New Birmingham is located the Star and Crescent furnace. The company operating this furnace controls a large tract of iron-ore land, Leon F. Hauptman, a well-known engineer of New Orleans, La., recently investigated the furnace and ore property. In his report he said that the ore varies in quantity from twelve inches to forty eight inches in thickness, and the supply is unlimited. It is easily mined, as it is mostly on the surface of the ground. The ore averages over 50 per cent. of pig iron when melted at the furnace. In the opinion of Engineer Hauptman this percentage could be largely increased by washing the ore, and the furnace, whose present capacity is fifty tons, could probably turn out seventy-five tons of pig iron at a reduced rate of fuel. An abundant supply of limestone is nearby, and can be delivered at the furnace at \$2.25 per ton. Contracts for furnishing wood from the densely-timbered surrounding country can be made at the rate of \$1.95 per cord by trainloads. To supply the furnace with charcoal there are thirty-one ovens. Each one has a capacity of sixty-four cords of wood, and gives on an average 3200 bushels of charcoal per charge, or fifty bushels to the cord. The water-supply system for the works includes a 50,000-gallon iron tank connected with a reservoir one mile distant by a six-inch pipe. The furnace and equipment, as well as the facilities provided, are considered of a modern type, and Engineer Hauptman says that he cannot find any disadvantage to prevent this furnace from producing charcoal pig iron at as low a figure as any in the United States. The property is now for sale, as announced in our advertising columns.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

*Means machinery is wanted, particulars of which will be found under the head of "Machinery Wanted."

✶ In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

THE New York Compress Co., of New York city, is in treaty for the sale of its compress to a Southern town, but no contract has been signed yet.

ALABAMA.

Anniston-Tannery.—W. M. Schroeder has completed his tannery, consisting of main building two stories high, 30x50 feet, and a one story annex 18x22 feet. Fourteen vats are equipped and 100 hides will be used weekly. It is contemplated to have a steam tannery in the near future.

Birmingham-Publishing.—The declaration of incorporation of The Birmingham State has been filed. The incorporators are Hugh M. Wilson, of Opelika; Joseph Hodgson, of Mobile; C. A. Mountjoy, Nathan L. Miller, Louis V. Clark, vice-president, and John W. Tomlinson, president, of Birmingham. The capital stock is \$25,000.

Birmingham-Steel Plant.—A report says that the Birmingham Rolling Mill Co. will lease the old Henderson steel plant at North Birmingham and utilize it to manufacture steel from hot metal to be furnished by the Sloss Iron & Steel Co.'s furnaces.

Cullman-Ice Plant.—Ernst Hauk will erect a five-ton ice plant.

Decatur-Chair Factory.—J. S. Richardson and associates have recently established a chair factory in East Decatur.

Decatur-Saw Mill.—Arantz Bros. have completed their new band mill of 40,000 feet daily capacity.

Florence-Telephone System.—The establishment of a telephone system is proposed. Robert Andrews, W. M. Price, John W. Hall and others are interested.

Florence-Flour Mill.—West & Edwards will build the flour mill lately noted.

Florence-Woolen Mill.—A woolen mill is being talked of.

Huntsville-Cotton Mill.—A report says that the old Bell factory will be turned into a cotton mill.

Huntsville-Cotton Mill.—W. S. Wells and W. P. Newman are interested in a new cotton mill to be built soon.

Iron City-Iron Mines.—Seavy & Fagan will operate the sphatite iron-ore mines, employing fifty hands.

Livingston-Electric-light Plant.—The city will put in an electric-light plant. Address W. K. Smith, secretary Commercial Club.*

Montgomery-Fire Apparatus.—The city hook and ladder company has petitioned the city council for additional fire apparatus. Address the mayor.

Paint Rock-Saw Mill.—E. C. Payne, of Decatur, has put in a new modern band-saw outfit at his Paint Rock mill.

Sheffield-Furnaces.—Wade Allen, of Florence, and associates, who have leased the Hattie Ensley furnace, leased under the name of the Colbert Iron Co.

Thomas-Furnaces.—The Pioneer Mining & Manufacturing Co. will put its two furnaces in blast at once.

Tusculum-Cotton Mill.—The Commercial Club has a proposition from a company for the building of a cotton mill.

ARKANSAS.

Batesville-Hoop Mill.—R. P. Hitchcock is equipping a hoop mill of 20,000 daily capacity.

Jonesboro-Ice Plant, etc.—The Bohne & Huse Ice Co. has been incorporated by B. C. Graves

and William Belcher, of Memphis, and R. P. Martin, A. L. Krewson and E. F. Young; capital stock \$12,000. The corporation is for the purpose of manufacturing ice, soda and mineral waters, etc.

FLORIDA.

Fairfield-Lumber Mill.—C. L. Bucki will increase the capacity of his lumber mill.

Fernandina-Rice Mill.—The erection of a rice mill is talked of. Baer & Darling can be addressed.

Gainesville-Brick Works.—C. M. Thompson and C. M. Rogers, of Brewton, Ala., will remove to Gainesville and erect brick works.

Key West-Sponge Company.—The Key West Sponge Co. has been incorporated with a capital stock of \$50,000, and George S. Waite is president; Oscar Reiersen, general manager; John T. Sawyer, treasurer, and E. M. Martin, secretary.

Ocala-Cigar Factory.—J. Morales & Co. have let contract for rebuilding their cigar factory to Geo. Mackay at \$10,000.

Ocala-Cigar Factory.—A movement for a cigar factory has been started. A. H. Birdsey and others are interested.

Orlando-Cigar Factory.—L. C. Vaughan and A. W. C. Smyth propose the organization of a \$50,000 stock company for manufacturing cigars.

Sanford-Cigar Factory.—The Eagle Cigar Co. will double the capacity of its factory.

Tallahassee-Telephone System.—M. B. Rice will construct a telephone line and is now at work on same.

Tampa-Gas Plant.—Peter O. Knight, of Tampa; Albert J. Boardman, of Minneapolis, Minn., and Edward Manrara, of New York, will incorporate a \$150,000 stock company to erect a gas plant.

Tampa-Manufacturing.—The Conette Novelty Manufacturing Co. has been organized to manufacture novelties for mercantile business. Buildings will be erected at once, and the principal product is to be the embroidery machine patented by M. F. Conette, of Kansas City, Mo.

GEORGIA.

Athens-Electric and Water-power Plant.—The Tallahassee Shoals Electric Co. is to be chartered, its purpose being to develop the water power of the Tallahassee shoals and transmit same as electricity to Athens. The capital stock is to be \$50,000.

Atlanta-Steel Bridge.—Contract for erecting the steel bridge on Broad street has been let to the Edgemore Bridge Co., of Wilmington, Del., at \$22,200.

Atlanta-Manufacturing, etc.—The Atlanta Inventors' Development & Manufacturing Co., noted last week as chartered, will manufacture patented articles and deal in patents generally. S. T. Neil is president; J. A. Spain, secretary-treasurer, and J. S. Moore, mechanical expert.*

Atlanta-Electric-light Plant.—H. M. Atkinson's plans for supplying electric lights and power for the exposition grounds have been approved. The plan shows a 1000 horse-power electrical plant, 500 arc lights of 2000-candle power each and 10,000 incandescents, etc.

Brunswick-Brewery.—P. H. Walters, of Savannah, and a Mr. Betz, of Philadelphia, are negotiating for the Brunswick Brewery.

Brunswick-Bleachery.—For information regarding proposed bleachery write to B. W. Elder.

Cartersville-Cotton Mill.—A proposition for a cotton mill is under consideration. Address G. H. Aubrey.

Columbus-Ice Plant.—Abram Ilges will erect an ice plant.

Columbus-Oil Mill.—A movement is afoot for the erection of a cottonseed oil mill.

Dalton-Cotton Mill.—The Crown Cotton Mills, of Dalton (not Dublin, as stated by error last week), will at once commence preparations for adding a 5000-spindle mill to its present plant (5000 spindles).

Dublin-Compress, etc.—J. D. Stokes, J. F. Dudley, J. C. Williams, I. H. Williams and R. C. Henry have incorporated the Georgia Warehouse & Compress Co. to erect cotton compresses and warehouses. The capital stock is \$5000, with privilege of increasing to \$50,000.

Elberton-Bottling Works.—A charter has been granted to the Elberton Mineral Springs Co. to bottle and ship the water of the Elberton mineral springs.

Georgia-Gold Mines.—Jno. A. Webb, of Chattanooga, Tenn., is endeavoring to form a company in Chattanooga to develop gold deposits in Georgia.

Griffin-Telephone System.—The Bell Telephone Co. will extend its line from Griffin to Columbus via Warm Springs, Greenville, Hamilton and Shipley.

Macon-City Improvements.—An election will be

held on April 11 to consider a bond issuance for \$130,000 to improve streets, lay off parks, etc. Address the mayor.*

McDonough-Cotton Mill.—Thos. D. Stewart, J. W. Alexander and Wilson Pullen will erect a \$50,000 cotton mill.

Rome-Cotton Mill.—The Massachusetts Cotton Mills, of Lowell, Mass., will at once build its mill lately noted as decided on. The plant will cost not less than \$100,000 and contain not less than 10,000 spindles.

Rome-Telephone System.—J. W. Dodds, of Cedartown, and G. G. Leake, of Marietta, are organizing a telephone system for Rome. Over 100 subscribers have been secured.

Savannah-Telephone System.—A new telephone company is being organized; over 300 subscribers have been secured.

KENTUCKY.

Hawesville-Coal Mine.—N. B. Chambers, of Hawesville, and R. B. Pierce, of Cloverport, have leased 700 acres of land, and will develop coal beds on same.

Hopkinsville-Tobacco Factory.—A tobacco factory 40x120 feet will soon be erected.

Louisville-Telephone Construction.—The Harrison Telephone Construction Co. for Kentucky and Tennessee has been incorporated with a capital stock of \$100,000. The incorporators are G. A. Doile, of Minneapolis, Minn.; J. C. Strother, F. H. Barney, H. K. Cole and D. M. Goodwin.

Maysville-Pulley Factory.—J. T. Long contemplates starting a pulley factory.

Versailles-Electric-light Plant.—The city will build an electric-light plant. Address the mayor.

Winchester-Machine Works.—W. A. Attersall & Son have added turning lathe, drill press and other machinery to their works.

LOUISIANA.

Haasville-Heading and Stave Mill.—The Lone Pine Lumber Co. is equipping a plant for the manufacture of staves, heading and hoops for 1000 barrels daily.

Monroe-Telephone System.—The new telephone company is known as the Monroe Telephone Co., and will construct plant of 200 instruments; W. B. Reily, president.*

New Orleans-Sugar Refinery.—Another meeting has been held to further the sugar refinery project lately noted, and over \$165,000 was subscribed. For information address J. N. Pharr, of Berwick City.

Ramos-Lumber Mill.—The Ramos Lumber & Manufacturing Co., Limited, is now negotiating for a new band mill and other machinery.

Westlake-Turpentine Plant.—J. C. Schuler has received his first carload of patent cups and has started to put them up for turpentine plant. He expects to put up ten crops, 100,000 cups. It will be finished about the 15th of May.

MARYLAND.

Baltimore-Distillery.—The Dealers' Distilling & Distributing Co. has been incorporated with a capital stock of \$100,000 to handle spirits, buy, sell and operate distilleries. The directors are: Julius Marcus, Leopold Wallach, Caleb M. Hillman, Robert P. Buchanan and Luther W. Emerson.

Baltimore-Mercantile.—The Southern Business Association of Baltimore has been incorporated by Joseph T. Tripp, John F. Thomas, John T. Davis, John W. Boyer, John W. Green, Spencer Stanley, John R. Taylor, Armistead Ward, John T. Chew, Henry F. Roberts, James W. Boone and John J. Henry. The corporation will deal in real estate and buy all kinds of merchandise; capital stock \$10,000.

Baltimore-Water Supply.—The water board has determined to prepare plans for extending the city's water supply in the annex. Saml. M. Gray, of Providence, R. I., is consulting engineer.

Baltimore-Condensed-milk Works.—A certificate of incorporation of the American Sterilized Food Co. of Baltimore County has been filed with S. Gordon Armistead, Louis Edelman, Charles H. Neal, George W. Neal and Edwin J. Farber, of Baltimore, as incorporators; also directors for the first year. The capital stock of the company is \$3000, and its purpose is the manufacture of condensed and sterilized milk and cream and other sterilized foods; president, S. Gordon Armistead; vice president, Charles H. Neal; secretary and treasurer, George W. Neal.

Baltimore-Slate Quarries.—The Peach Bottom Slate Co. for working quarries, has been incorporated by Lewis Lauer, Julius Stern, Leopold Stern, Leon Lauer and Martin Lauer, with a capital stock of \$5000.

Baltimore-Chewing-gum Factory.—The Oriole Gum Co. has been incorporated with a capital stock of \$10,000 for the manufacture of chewing gum specialties and other novelties and com-

pounds. The incorporators are J. Thomas Reinhardt, Samuel B. Lee, Albert H. Smith, George J. Fairbank and Edwin J. Farber. The officers are: President and treasurer, J. Thomas Reinhardt; vice president, George J. Fairbank; secretary and manager, Samuel B. Lee.

Baltimore-Grate Works.—The Worthington Grate Co. has been incorporated by Dall Worthington, John W. Diven, Thos. M. Diven, Herman R. Travers, Christian Peterson and John G. Ernest for the manufacture of furnace grates. The capital stock is \$36,000.

Baltimore-Mining.—The Corry Mining Co. has been incorporated by Oliver F. Lantz, Henry C. McComas, D. Hutton Flack, Harry A. Barry and Abner Greenleaf for the purpose of doing a general mining business in Colorado and Maryland. The capital stock is fixed at \$40,000.

Benning, D. C.-Abattoir.—W. G. Sullivan & Co., of Washington, have leased the Benning abattoir building, and will utilize it as an abattoir, etc.

Chestertown-Marl Beds.—Thomas Hill, of Baltimore, intends to develop marl beds in Kent county, and will put in improved steam apparatus for mining and handling.

Elkton-Foundry.—Powers & Cory will enlarge their foundry plant to enable them to complete a \$100,000 order just booked.

Frederick-Telephone System.—The Interstate Telephone Co., organized several months ago, is about to construct its system.

Ocean City-Laundry and Ice Plant, etc.—The Sinepuxent Beach Co. (office, Equitable Building, Baltimore, Md.), will add a steam laundry and ice plant to the Atlantic Hotel and enlarge its electric-light plant. At a meeting of the stockholders in Baltimore last week capital stock was increased from \$60,000 to \$120,000 to pay for above and other improvements.

Taylorsville-Cannery.—It is reported that Baltimore packers will establish a large cannery in Taylorsville or Galesville.

Towson-Publishing.—The Baltimore County Democrat has been incorporated for the purpose of conducting a job-printing and publishing office with a capital stock of \$5000. The incorporators are Joshua Tracey, Joshua Benson, Frank I. Duncan, John W. Shanklin and Charles B. McClean.

Tunis Mills-Lumber Mill and Cannery.—The Tunis & Bro. Lumber Co. will rebuild its cannery and \$15,000 saw and planing mill noted as burned.

Washington, D. C.-Land Improvement, Electric-lighting, Water Supply, etc.—The Woodley Land Co. has been incorporated (in Virginia) with a capital stock of \$7,000,000 and John J. Hemphill, of Chester, S. C., president; Alex. S. Porter, of Boston, Mass., vice-president; A. Marcus, treasurer, and Duane E. Fox, of Washington, secretary. The company will purchase 400 acres of land in the northwest section of the city, lay off same into building lots, provide water and light, etc. Address the secretary as above.

Washington, D. C.-Power-house.—The rolling stock and power-house of the Georgetown & Tennyaltown Railroad will be completely overhauled. Address company at 1405 F street N. W.

Westminster-Telephone System.—The Western Maryland Telephone Co. has been incorporated to construct a telephone system. P. J. Bennett is president; Chas. E. Fink, vice-president; J. M. Reifsnider, secretary-treasurer, and H. B. Hazlett, general manager.

MISSISSIPPI.

Aberdeen-Canning Factory.—A cannery is contemplated, so George Reynold's informs us.

Grand Gulf-Stone Quarry.—J. H. Gunning, of New Orleans, La., will develop a stone quarry at Grand Gulf, and is putting in an equipment at a cost of \$15,000.

Hollandale-Grain Mill and Elevator.—The Deer Creek Elevator Trading Co. has been organized to erect a grain elevator and mill for grinding and bolting meal. John T. Casey is president; John H. Crouch, vice-president, and J. J. Richards, secretary-treasurer.

Scranton-Mercantile.—Louis P. De Jean and Edmund Mitchell have incorporated the De Jean & Mitchell Co. to transact a mercantile business. The capital stock is \$25,000.

MISSOURI.

Kansas City-Viaduct.—It is proposed to construct a viaduct over the railroad tracks on Twenty third street at a cost of \$40,000. H. H. Filley can be addressed.

Kansas City-Electric Plant.—A \$20,000 electric-power plant will be built for the Independence Dummy Line; contracts awarded.

Lexington-Bridge.—A company has been organized to construct the bridge lately noted, and charter has been obtained from Congress. J. C. McGrew is president.

St. Louis-Realty.—The Gerhart Realty Co. has

been incorporated with \$30,000 capital by F. H. Gerhart, C. B. Gerhart and Wm. J. McGrade.

St. Louis—Salve Factory.—The Homo Salve Co. has filed articles of incorporation with a capital stock of \$2000 by W. R. Trower, Thos. H. Larkin and C. C. Collins, incorporators.

Springfield—Artesian Well.—There is a movement afoot to sink an artesian well.

NORTH CAROLINA.

Concord—Cotton Mill.—Bids are solicited for J. C. Lippard's cotton mill, lately noted; building to be two stories high and have one story annex, iron roof, brick or steel smokestack ninety feet high, fifteen horse-power engine, 175 horse power boilers and complete equipment for mill, etc.

Elkin—Cotton Mill.—The Chatham Manufacturing Co. (making cassimeres, jeans, blankets and hosiery) has decided to erect a 5000-spindle cotton mill. The house will be built this season, but no machinery will be bought until next year.

Hickory Grove—Cotton Mill.—The Collier Cotton Mills has been chartered by J. N. McDill, Jas. W. Castels, W. J. Moorehead, T. M. Whisenant and others for the purpose of erecting a cotton mill. The capital stock is \$100,000.

Raleigh—Cotton Mill.—The Raleigh Hosiery Yarn Mill has increased its capital stock by \$50,000, and will put in 8500 additional spindles.

Rockingham—Cotton Mill.—The new mill in which Robt. L. Steele, Jr., is interested, noted some weeks ago, is to be built at once. Ten thousand spindles and 500 looms will be put in. Company has been incorporated as the Steele's Mill, with the following incorporators: Thos. W. Thos. W., Jr., Robt. L. and Robt. L., Jr., Walter F. L. and Stephen W. Steele.

Thomasville—Furniture Factory.—F. S. Lambert & Co. contemplate starting a furniture factory.

Wadesboro—Cotton Mill.—The Wadesboro Cotton Mill Co. will put in its plant 1644 new spindles, making 6704 in all.

SOUTH CAROLINA.

Bamberg—Fire Company.—The Artesian City Fire Co. has been organized by W. G. Smith, W. D. Rhoad, John D. Folk, E. L. Price and D. J. Rowe. The city will purchase hook and ladder and other equipment for the company. Address the mayor.

Bamberg—Water Works.—The construction of water works is talked of. Address the mayor.

Camden—Brick Works.—The Camden Press Brick Co., noted during the week as chartered, has been organized with F. M. Zemp as president; W. E. Glenn, vice president and yard manager, and J. J. Goodale, secretary-treasurer. Works will be built at once.

Cheraw—Broom Factory.—A. Pollock will equip a broom factory.

Greer Depot—Oil Mill.—A commission for a charter has been issued to the Home Oil Mill with a capital stock of \$15,000. The corporators are H. P. Moore and W. C. Moore.

Newry—Cotton Mill.—The Courtenay Manufacturing Co. will enlarge its plant and add more new machinery.

Sumter—Packing-house.—The establishment of a packing-house is talked of. The Sumter Ice Manufacturing Co. can be addressed.

Walterboro—Dry-kiln.—C. A. Savage will erect a lumber dry-kiln.

Walterboro—Land Company.—A commission for a charter has been issued to the Colleton Land & Improvement Co. The corporators are B. C. Bellinger, J. M. Patterson and John Black, and the capital stock is \$10,000.

TENNESSEE.

Brownsville—Ice Plant.—W. F. Carliss will erect an ice plant.

Chattanooga—Telephone Extension.—The East Tennessee Telephone Co. is making preparations for the immediate extension of its lines to Jasper, South Pittsburg and Bridgeport.

Chattanooga—Telephone System.—The People's Telephone & Telegraph Co., of Knoxville, is now endeavoring to secure franchise; J. C. Duncan, general manager.

Geib (not a postoffice)—Woodworking Plant.—Geib Bros., of Newburgh, Wis., will locate a hub, spoke and felloe factory at Geib.

Greenville—Telephone System.—The East Tennessee Telephone Co., of Knoxville, will construct system in Greenville.

Humboldt—Electric-light and Water Works.—The city will hold an election to consider issuing \$15,000 in bonds for water works and electric lighting; J. C. Crewe, mayor.

Knoxville—Machine Works.—Application has been made to incorporate the Anderson Manufacturing Co. with John F. Anderson, W. S. Shields, Sam McKinney, C. W. Steele and W. A. Galbraith as incorporators. Mr. Anderson recently bought the Knoxville Engine and Pump Works plant, which was involved in the courts, and the new charter is for the purpose of enabling him to enlarge the plant so as to include the general manufacture of machinery and the operation of a general foundry.

Morristown—Water Works.—The city contem-

plates building water works. Address R. F. Taylor for information.

Murfreesboro—Pencil Factory.—The Eagle Pencil Co., of South Pittsburg (main office, New York), contemplates building a factory in Murfreesboro.

South Pittsburg—Match Factory.—The American Match Co., of Lebanon, Pa., will probably submit a proposition for erecting a plant at South Pittsburg.

Tennessee—Coal Lands.—Jno. H. Inman, of New York, has sold a tract of 45,000 acres of Sequachee Valley coal lands to Eastern capitalists for \$275,000. The property will be developed.

Tennessee—Development Company.—The Tennessee Union Land Development Co., capital stock \$300,000, has filed articles of incorporation at Edwardsville, Ill., its purpose being to develop Tennessee lands. The incorporators are F. G. Wm. F., Thos. K. and Geo. W. Niederinghouse and C. O. Godfrey.

TEXAS.

Aransas Pass—Steel Pier.—The Youngstown (Ohio) Bridge Co. has begun the erection of the steel work for the Padre Island pier in Corpus Christi bay. The contract embraces a double-track steel viaduct 4000 feet long.

Austin—Publishing.—The populists propose forming a company to start the publication of a daily newspaper. A meeting has been held and over \$30,000 subscribed. Address Marion Williams, of Taylor.

Austin—Light and Water.—The mayor recommends an election to consider issuing \$200,000 in bonds for laying additional pipe, building reservoir, etc.

Beeville—Water System.—Greathouse & Taylor have contracted with the Beeville Water Co. to make extensions to its system. About one mile of six-inch pipe will be used.

Brenham—Furniture Factory.—A Syracuse (N. Y.) party contemplates establishing furniture factory in Brenham. Address F. Kiber, of Houston.

Clarksville—Compress and Oil Mill.—Report says that a cottonseed-oil mill and a cotton compress will be built.

Colorado City—Wool-scouring Mill.—The Colorado City Wool Scouring & Manufacturing Co. has been organized with W. T. Campbell, of Lampasas, as president; Sig. Simon, of Colorado City, vice-president; W. T. Scott, of Colorado City, secretary-treasurer, and W. P. Prestidge, of San Angelo, Texas, manager. The company will establish a wool-scouring mill of 2,500,000 pounds capacity yearly. All the machinery needed has been secured.

Corsicana—Water Works.—The Corsicana Water Development Co. (James L. Autry, president) contemplates putting in a complete modern water system for a city of 10,000 people. The company owns one artesian well (and is boring two more) which has daily flow of 386,000 gallons of pure water, with surface pressure of fifty-six pounds. Plans and details not yet adopted, but would be pleased to hear from interested parties on subject of plans and engineering supervision, as well as for material.

Cuero—Compress.—The Cuero Cotton Compress Co., capital stock \$75,000, has been incorporated by Edward Muggs, W. K. Breeden, Louis Keller, John Stratton and C. H. Bond.

Dallas—Cotton Compress.—E. Allyn, of Havre, France, and Paton & Co., of Liverpool, England, will build in Dallas hydraulic cotton compress of 2000 bales daily capacity at a cost of about \$150,000. The plant is to be after the patents and designs of W. W. Bierce, of Montgomery, Ala., and work on it will be commenced at once.

Farmersville—Water Works.—The city will probably grant franchise for water works. Address A. H. Neathery.

Fort Worth—Construction.—The Texas Construction Co., capital stock \$10,000, has been incorporated by J. T. Taylor, J. C. Buchanan and Wallace Hendricks.

Galveston—Brewery.—The Galveston Brewing Co. will be organized, as lately reported, and erect a brewery, capital stock to be \$400,000. Adolphus Busch, of St. Louis, Mo., is interested; B. H. Peters, manager Galveston branch.

Galveston—Manufacturing.—The Phoenix Manufacturing Co. has filed a charter. H. C. Howel, N. D. Trout and John W. Wray are the incorporators, and the capital stock is \$10,000.

Galveston—Bridges.—The bridge across Galveston bay, which is to be built by the Galveston, Laporte & Houston Railroad, from near Virginia Point to Galveston Island, will include a pile trestle over Galveston bay nearly 11,000 feet in length, with a draw span over the channel 210 feet in length. Besides this bridge the company will build a draw span over Clear creek, which will be 130 feet in length, and one over Buffalo bay 204 probably 250 feet in length. F. H. Peters, of Houston, the chief engineer of the railroad, will have direct charge of the work.

Goliad—Water and Lighting Plant.—The proposed company lately noted has been organized as the Goliad Water & Light Co., and petitioned for franchise. Address W. E. Campbell, president.

Goliad—Water Works.—Greathouse & Taylor, of

Beeville, are making plans for the Goliad Water Co.'s plant.

Houston—Bolt Factory.—B. A. Riesner will start a bolt factory of 6000 daily capacity.

Houston—Flour Mill.—The Houston Mill & Elevator Co. has been incorporated to erect and operate a mill for grinding wheat, corn and other grains; capital stock \$14,000. Incorporators are L. L. Tompkins, R. V. Lane and W. H. Lovell.

Jefferson—Iron Furnace.—The purchasers of the Lone Star Iron Co.'s furnace have organized under the name of the Jefferson Iron Co. with W. B. Ward, A. H. Schluter, T. J. Rogers, R. E. Rowell, W. T. Atkins, B. F. Sherrell and L. S. Schluter as directors. The capital stock is \$100,000, and charter will be applied for.

Kaufman—Electric-light Plant and Woodenware Factory.—The Kaufman Manufacturing Co. will be organized to erect a plant for the manufacture of woodenware. Hall & Allen, of the Dallas (Texas) Manufacturing Co.; H. J. Snow, of Kaufman, and others are interested. The company will also put in an electric-light plant.

Mineral Wells—Flour Mill.—D. M. Howard and M. R. Birdwell will erect a roller flour mill of 500 bushels daily capacity.

Mineral Wells—Water Works.—The city has let contract for the construction of a system of water works. Address the mayor.

Morgan—Water System.—A system of water supply will probably be established.

San Antonio—Brick and Tile Works.—The Oppenheimer Brick & Tile Co., lately noted as chartered, will erect brick and tile works, and is now buying outfit.

San Antonio—Coal Mines.—Bart DeWitt will open a coal mine on his ranch near San Antonio.

San Antonio—Land Company.—The Laurel Heights Land & Improvement Co., capital stock \$100,000, has been incorporated by J. E. Adams, W. B. Craig, R. W. Orvis and A. C. Craig.

San Antonio—Paper Mill.—R. L. Burnett, late of the Texas Paper Co., of Dallas, will erect a paper mill in San Antonio to employ twenty-five hands. Complete outfit of latest improved machinery has been ordered.

Warren—Telephone System.—The Warren Land & Lumber Co. contemplates constructing telephone system, including a 15 mile line to logging camp.

VIRGINIA.

Alexandria—Feed and Grist Mill.—Grillbortzer Bros. will put in a grist and feed mill.

Boydton—Heel and Tap Factory.—G. M. Brown and C. D. Parks will establish a heel and tap factory.

Bristol—Water Works.—The city will shortly decide as to expending \$11,000 to improve its water works. Address the mayor.

Charlottesville—Mercantile, etc.—A charter has been granted to the Connell Building Co. with G. E. Connell, president; J. B. Wingfield, superintendent; W. P. Connell, secretary and treasurer. Company's purpose to deal in lumber, etc.; capital stock \$5,000.

Charlottesville—Electric light Plant.—The Jefferson Park Co., reported last week as incorporated, will erect an electric-light plant. The machinery is to consist of low speed engine, and boiler, coupled direct or belted to single or series of dynamos and light machines for 2000 incandescent lamps.

Fredericksburg—Telephone System.—The Woodbridge & Occoquan Tele. one Co. has obtained franchise and will establish system.

Manchester—Drainage.—The city will probably pass an ordinance for expending \$65,000 on drainage system. Address the mayor.

Norfolk—Electric Plant.—The power plant for the Portsmouth & Port Norfolk Railway will consist of a brick building 38x115 feet and an L. 33x70 feet, steam plant of two 100 horse power engines and boilers, etc.; contracts all placed.

Ocean View—Electric-light and Power Plant.—The \$80,000 electric plant lately noted is to be built at once. Plans are ready for the building, which is to be two stories high, have iron roof, steel smokestack, and to contain two slow-speed steam engines, each 200 to 250 horse power, belted or coupled direct to 500-volt dynamos for motive power and light. Address H. L. Page, secretary Norfolk & Ocean View Railroad Co., Norfolk, Va.

Portsmouth—Electric Plant.—New electric power plant will be built for the Portsmouth Street Railway.

Richmond—Sewers.—The city will soon be preparing to obtain bids on \$40,000 worth of sewer work. Address the mayor.

Richmond—Mercantile.—A charter has been granted to the Christian & Winfree Co. for the purpose of conducting a general mercantile business for the manufacture, purchase and sale of tobacco, etc. The capital stock is to be not more than \$50,000. The officers are: President, H. L. Denoon; vice-president, Percy C. Christian; secretary and treasurer, Isaac B. Davenport.

Roanoke—Theatrical.—A charter has been granted to the Academy of Music Co., the purpose of which is to conduct a theatrical business. The capital stock shall not be more than \$75,000. The

officers are: H. D. Lafferty, president; W. H. H. Dorney, secretary and treasurer. The directors are the above and D. I. Bachman, William N. Morgan and C. A. Fischer.

Staunton—Telephone System.—The Staunton Mutual Telephone Co., lately reported as being organized, has obtained charter with a capital stock fixed at \$2500 and privilege of increasing to \$25,000. R. S. Turk, president; W. L. Oliver, vice president, and Edgar M. Funkhouser, secretary-treasurer.

WEST VIRGINIA.

Fairmont—Coal-mining.—A certificate of incorporation has been issued to the Buffalo Coal & Coke Co. with a capital stock of \$500,000. J. E. Watson, O. S. McKinney, C. L. Smith, W. A. Ohley and George Dehob are the incorporators.

Hinton—Telephone System.—The Hinton Telephone Co. has been granted a charter with J. T. McCreery, Harvey Ewart, P. K. Litsinger, B. L. Hoge, J. M. Ayres and E. L. Briers as incorporators.

Sistersville—Canning Factory.—John Dana, of Helpe, Ohio, is in correspondence with the Board of Trade relative to establishing a canning factory.

Sulton—Coal-mining.—J. M. Boggs is endeavoring to organize a company for the purpose of developing an 1800-acre tract of coal land. Veins of coal three, four and seven feet thick are on the property.

BURNED.

Greenville, Miss.—The Planters' Oil Mill; \$142,000.

Groveton, Texas.—Josseland & Bros.' lumber mill; loss \$10,000.

Moss Point, Miss.—Dantzer & McInnis's shingle mill; loss \$5000.

New Lewisville, Ark.—The Red River Lumber Co.'s planing mill; loss \$5000.

New Orleans, La.—The International Cotton Press, loss \$50,000. The Kern coffin and box factory; loss \$10,000.

Salisbury, Md.—Parsons, Wimbrow & Co.'s kindling-wood factory; loss \$10,000.

Schulenburg, Texas.—Mrs. McKinnon's cotton gin.

Secretary, Md.—Conkle & Hubbard's shirt factory.

Toccoa, Ga.—The Toccoa Furniture & Lumber Co.'s plant; loss \$40,000.

Tunis Mills, Md.—The Tunis & Bro. Lumber Co.'s mill and cannery; loss \$20,000.

BUILDING NOTES.

Arkadelphia, Ark.—Store.—Thomas Harding, of Little Rock, is preparing plans for a \$5000 store for Arkadelphia.

Ashland, Ky.—Depot.—The Chesapeake & Ohio Railroad Co. (office, Richmond, Va.) will erect a depot at Ashland to cost several thousand dollars.

Atlanta, Ga.—Hotels.—The East Alabama Land Co. has determined to expend \$500,000 on a 250-room hotel and other buildings at the existing grounds. John H. Seals will build a hotel, four stories high, 157x200 feet, and to have steam or hot water heat, baths and all modern improvements. Frederic Ausfield has prepared plans.

Atlanta, Ga.—Store, etc.—Clem Harris has commenced work on a three-story building.

Atlanta, Ga.—Dwellings.—Henry Turner and John L. Tye will erect dwellings to cost from \$4000 to \$6000; plans now being prepared. Mrs. Elizabeth Sheehan will build four flats to cost \$7000.

Baltimore, Md.—Dwellings.—Nelson C. Showace has prepared plans for eight residences, to have jeweled and beveled glass, best electric and gas crystal chandeliers, electric bells, steam or furnace heat, etc.; estimate cost \$100,000. Same architect has also plans for six brick and brownstone three story dwellings, to have electric bells and tubes, crystal chandeliers for electric and gas, patent electric lighters, etc.; cost \$75,000.

Baltimore, Md.—Dwellings.—C. E. Cunningham has purchased for \$60,000 thirteen acres of land at Hampden on which a number of dwellings will be built.

Barnesville, Ga.—Courthouse.—The county commissioners contemplate building a \$25,000 courthouse.

Bedford City, Va.—Hall.—The Liberty Masonic Lodge has decided on plans for its temple; estimated cost to be \$5500.

Biscayne, Fla.—Hotel.—It is reported that H. M. Flagler may build a hotel at Biscayne Bay to cost over \$500,000.

Brunswick, Ga.—Depot.—The proposed union passenger depot will be built under direction of Geo. W. Haines, superintendent B. & W. R. R. Plans have already been prepared. It will be of brick covered with slate. Contract is to be let at once. The main building will be 70x25 feet, inside measurement; will contain ticket office and waiting-rooms; baggage and express offices will be separate building. It is estimated the entire work, including platforms, etc., will cost about

\$10,000. Any further information will be furnished by Mr. Haines.

Cameron, Texas.—Jail.—Contract for building new jail has been let.

Camden, Ark.—Bank Building.—Thomas Harding, of Little Rock, is preparing plans for a \$7000 banking-house for Camden.

Clarksville, Texas.—Hotel.—B. A. Dinwiddie and L. C. Stiles will build a \$40,000 hotel.

Clear Creek, Texas.—Church.—A Baptist church will be built. Mr. League can be addressed.

Dallas, Texas.—Warehouse.—The Waters-Pierce Oil Co. will erect a warehouse.

Decatur, Ala.—Depot, etc.—A depot with extensive cotton warehouses and platforms will be built.

Dublin, Ga.—Warehouses.—The Georgia Warehouse & Compress Co. will erect cotton warehouses. Address J. D. Stokes.

Ellisville, Miss.—Church.—The Baptists are preparing to build a church.

Frederick, Md.—Engine-house.—The Independent Hose Co. has determined to erect a new engine-house and hall. It will cost about \$4000, and will be fitted with all the modern appliances.

Hamlet, N. C.—Hotel.—Mr. Altord, of Martin, will build a hotel in Hamlet.

Houston, Texas.—Auditorium.—The Auditorium Association has obtained permit to erect an auditorium to cost \$16,000.

Lake City, Fla.—Hall.—Plans will be prepared for the Masonic hall lately noted, to have a nautical brick trimmings, cement cellar, oiled wood inside finish, with store and offices on first and second floors and Masonic temple on third; will have furnace, plumbing, ornamental staircase; full set of appointments for Masonic purposes will be purchased. Address H. A. Parr, secretary.

Little Rock, Ark.—Business House.—Thos. Harding is preparing plans for a business house for Lizzie Shall to cost \$10,000.

Louisville, Ky.—Car Depot.—The Louisville Railroad Co. will erect a new car-barn.

Louisville, Ky.—Clubhouse.—McDonald Bros. have prepared plans for a clubhouse to be erected at Iroquois Park, to have electric bells and lighting, gas fixtures, etc.; cost \$3600.

Louisville, Ky.—Store, etc.—Boyle & Struby have prepared plans for a double store for John Hardy, to be 42x71 feet in size, two stories, have galvanized-iron cornices, iron and marble mantels, electric bells, etc.; cost \$5000. Henry Diehl has prepared plans for a residence, to be 32x57 feet, two and a half stories, built of brick and terra cotta, have galvanized-iron cornices, marble mantels, electric bells and lighting, furnace, etc.; cost \$4000.

Murfreesboro, Ark.—Courthouse.—Pike county will rebuild its burned courthouse but no arrangements have as yet been formulated: J. C. Hughes, clerk to commissioners.

New Orleans, La.—Dwellings, etc.—M. E. Rau will erect a \$3485 frame dwelling; Geo. W. Heyde, a \$4685 frame dwelling, and Thos. B. Jordan, a \$3000 frame dwelling.

New Orleans, La.—Roundhouse.—The Illinois Central Railroad contemplates building a new roundhouse.

Ocean View, Va.—Hotel.—Additions to the hotel lately noted will consist of four-story building, to have electric light, steam heat, steam-power freight and passenger elevators, water-closets, French baths, plumbing, marble lavatories, steam- and laundry fixtures, latest hotel cooking range, etc., electric call-bells and fire-alarm, fire-escape, safe, furniture for office, parlors and bedrooms; cost \$200,000. Address H. L. Page, secretary Norfolk & Ocean View Railroad Co., Granby street, Norfolk, Va.

Owings Mills, Md.—Hospital.—Plans will be made at once for the \$5000 building, lately noted, to be three stories high, have iron roof, furnace heat, passenger elevator and automatic fire-extinguisher on each floor. Address superintendent Asylum for Feeble Minded Children.

Pensacola, Fla.—Courthouse.—Contract for building annex to courthouse, has been let to S. S. Leonard at \$24,400.

Raleigh, N. C.—Jail.—The \$25,000 jail noted last week will not be built, as the bill providing for same did not become a law.

Richmond, Texas.—Depot.—Endeavors will be made for the erection of a union depot. Address R. L. Eckman.

Rockport, Texas.—Sorenson & Hoopes will erect a brick building.

Saltville, Va.—Church.—A church will be built. Address Rev Geo. D. French.

Ship Island, Miss.—Hospital.—Proposals for erecting marine hospital building at Ship Island will be received until April 23. Address Chas. E. Kemper, acting supervising architect, Washington, D. C. (See adv. in MANUFACTURERS' RECORD.)

Sistersville, W. Va.—R. Broadwater will erect a three-story building.

Sistersville, W. Va.—School.—An election will be held April 1 to vote on issuing bonds for \$20,000 to build the schoolhouse noted last week. Address A. B. Wilson, secretary.

St. Louis, Mo.—School Building.—Permit has been issued to W. Casimir Parish for a church and school to cost \$15,000.

St. Louis, Mo.—Theatre.—A summer garden and theatre will be built at a cost of \$60,000, including grounds, fixtures, etc. J. C. Jannopaulo and Ellis Wainwright are interested.

St. Louis, Mo.—Y. M. C. A. buildings for railroad men will be built at a cost of \$60,000. Address St. Louis Terminal Association.

Sturgis, Ky.—School.—Contract has been let at \$12,294 for the erection of building for the Baptist Male and Female Institute.

Washington, D. C.—F. G. Smith, 1223 Pennsylvania avenue will expend \$6000 in adding two additional stories to building.

Washington, D. C.—Dwellings.—N. T. Haller has obtained permit to erect six three-story brick dwellings.

Washington, D. C.—Dwellings.—Building permits have been issued to F. W. Carlyle for a \$4000 frame dwelling; Henry Calver, for a \$10,000 brick dwelling, and to D. E. Towson, for a \$3500 dwelling.

Westminster, Md.—Engine-house.—The Westminster fire department will erect a new building.

Weston, W. Va.—Church.—Geo. D. Giffin, of Fairmont, will prepare the specifications for the new St. Paul's Protestant Episcopal Church. The building is to seat 500 and be 84x104 feet in size.

Willis, Texas.—Warehouse.—Smith & Elder have awarded contract for a brick tobacco warehouse 30x100 feet, two stories high.

Wrightsville, Ga.—Courthouse.—The plans of Lucke & Stewart, architects, of Atlanta, have been accepted for Johnson county's new courthouse, to cost \$20,000. Bids will be asked for at once.

RAILROAD CONSTRUCTION.

Railroads.

Archer City, Texas.—The citizens are endeavoring to form a company to extend the line of the Missouri, Kansas & Texas, now under construction to Wichita Falls, to Archer. The distance is about twenty-five miles.

Ashville, Ala.—Hon. James T. Greene advises the MANUFACTURERS' RECORD that parties are expecting to take a bond issue to build the Tennessee River, Ashville & Clossa road from Decatur to Anniston.

Atlanta, Ga.—The Atlanta Electric Railway Co. has secured a franchise to build its line into the suburbs. Dayton Hale, of the Hale Investment Co., is president.

Crossville, Tenn.—Thomas McFarland, of Knoxville, has secured the contract to build a 600-foot tunnel on the line of the Tennessee Central road, also to grade the road from Crossville to Kingston. Jere Baxter, at Nashville, is president.

Ellaville, Fla.—The Suwanee River Railway Co. has been incorporated with \$1,000,000 capital to build the following lines: Bucki to Luraville, twenty-five miles; Jasper to Bucki, twenty-five miles; Luraville to Archer and Cedar Key, on the coast, ninety-three miles, and Eagle Mines to Wildwood, fifty miles, making 243 miles in all. E. J. Carter, of E. J. Carter & Co., bankers, 40 Wall street, New York, is president. The company now operates a road from Ellaville to Fredericksburg, thirty-seven miles long.

Erwin, Tenn.—It is stated that the owners of the Embreeville furnace intend building a road five miles long to Erwin to afford an outlet to market for iron products.

Fernandina, Fla.—The company promoting the line from Fernandina to Jasper to connect with the Georgia Southern & Florida road has been organized under the title of the Fernandina Western Railway Co. with \$200,000 capital to construct a railroad from Fernandina, extending westward through Nassau county to a point on the St. Mary's river, a distance of about forty miles, and to construct a line of road from a point near Elliott's Mound, in Baker county, westwardly through the counties of Baker, Columbia and Hamilton to the town of Jasper, a distance of about sixty miles. William R. Keily is president, and E. W. Bailey, secretary.

Gillett, Ark.—T. H. Leslie, vice-president of the Stuttgart & Arkansas River road, writes the MANUFACTURERS' RECORD that he desires bids for constructing twelve miles of the Pine Bluff & Eastern road to a connection with the Stuttgart & Arkansas River road. The bids are desired on three, six and nine months' time, with \$100,000 in bonds as collateral.

Harrisonburg, Va.—The people of Harrisonburg and vicinity have pledged \$150,000 in stock subscriptions for the proposed line from Chesapeake bay through Fredericksburg and Harrisonburg to the West Virginia coalfields. E. C. Machen, of New York, is one of the interested parties.

Hendersonville, N. C.—Messrs. Warren, Jenks & McNeely, contractors, inform the MANUFACTURERS' RECORD that day and night forces are grading the Hendersonville & Brevard line, and that they expect to complete it in fifty working days.

Two steel bridges will be used, for which contracts have been let, as well as sub-contracts.

Houston, Texas.—The road between Houston and La Porte has been completed and opened for operation. T. W. Ford is one of the company. The section from La Porte to North Galveston is being graded.

Jacksonville, Fla.—It is stated that the Jacksonville, St. Augustine & Indian River is to be extended from Palm Beach, its present terminus, along the east coast to Biscayne Bay, a distance of about sixty-five miles. H. M. Flagler, 26 Broadway, New York, is president.

Macon, Ga.—The Macon, Dublin & Savannah has secured the unfinished Macon & Atlantic line, and will extend to Savannah. James T. Wright, at Macon, is general manager. The line is completed and in operation from Macon to Dublin, fifty-four miles. To complete the road to Savannah will require seventy-eight miles of tracklaying and seven miles more of grading.

Montgomery, Ala.—About 115 miles of the Montgomery, Tuscaloosa & Memphis line have been graded, but no track laid. G. B. Shellhorn has been appointed receiver.

Moultrie, Ga.—The Georgia Northern Company is considering the idea of extending its line from Moultrie to Tifton, twenty-eight miles distant. O. L. Davis, of Moultrie, is one of the directors.

Natchez, Miss.—The Kansas City, Wabash & Gulf Company has offered to build its line from Alexandria to Natchez if the city will give 160 acres of land for terminals and take \$20,000 in stock subscriptions. J. B. Watkins, at Lake Charles, is president.

Prattville, Ala.—The spur of the Louisville & Nashville to Prattville has been surveyed, but Engineer Bradford informs the MANUFACTURERS' RECORD that no construction work has been done as yet.

Rockville, Md.—The Baltimore & Ohio engineers are completing surveys for a line across Maryland from Bethesda to a point on the Potomac river, which will be crossed by a bridge at High Island. [This is for the Metropolitan Southern branch, which is to terminate at a point near Fairfax Courthouse, Va.—Ed.]

Rocky Comfort, Ark.—The Winthrop & Rocky Comfort road is to be nine miles long and is to give an outlet to market for what is believed to be a deposit of cement rock now being analyzed. Local parties have formed a company having necessary capital.

San Antonio, Texas.—Surveys are being made for the proposed road between San Antonio and Brownsville. A route will be first laid out to Pleasanton, Texas. The company interested includes J. S. Doak, president; J. M. Puette, vice-president; Charles F. Scribner, engineer.

Selmer, Tenn.—The Selmer & Tennessee River Railroad Co. has decided to use steam instead of electric-power, and will build a road of standard gage about twenty miles long. George H. Bunch, at Memphis, is purchasing agent and traffic manager.

Shreveport, La.—It is stated that the Missouri, Kansas & Texas has made an arrangement to enter Shreveport by building twenty miles of extension from Jefferson, Texas, to Waskom, Texas, and connecting with the Queen & Crescent; also by building two and a half miles of road in Shreveport. Cary A. Wilson, at Parsons, Kans., is chief engineer.

Springfield, Mo.—It is stated that the company of which O. A. Crandall is president is making preparations to build the road proposed from Springfield to Miami, Mo.

Tazewell, Va.—Engineers are surveying a line of road along Dry Fork river in Tazewell county which is stated to be a proposed spur of the Norfolk & Western at Cedar Bluff. D. G. Sayers is interested.

Warren, Texas.—The Texas Timber Co. has decided to add several miles to its tramroad, which will be laid with 35-pound rails.

Welch, W. Va.—Regarding the proposed railroad through McDowell county, it is stated that surveys are about to be made for a line which will run through Jeffersonville and Pearyville and eventually extend along the Guyan river valley.

Wichita Falls, Texas.—The Henrietta & Wichita Falls branch of the Missouri, Kansas & Texas has been completed to a point eight miles from Henrietta; it will be completed to Wichita Falls about April 1. J. A. Kemp is one of its promoters.

Electric Railways.

Carthage, Mo.—President Calhoun, of the Jasper County Electric Railroad Co., advises the MANUFACTURERS' RECORD that its road will be eleven miles long, extending from Webb City to Carthage. Material and rolling stock have been secured.

Denison, Texas.—A franchise has been granted a company to build an electric line in the city along Main street.

Kansas City, Mo.—The General Electric Co. has secured the contract for rebuilding the Independence steam dummy line for use of electric motors. The cost will be about \$150,000. James R. Chapman is engineer.

Marshall, Mo.—The syndicate mentioned in the

MANUFACTURERS' RECORD of December 7 as planning to build an electric line forty miles long, between Marshall and Sedalia, includes W. G. Campbell and L. W. Hilliker, of Oakland, Cal., and W. M. Walker, of Marshall.

Memphis, Tenn.—John R. Godwin, E. S. Proudft and J. W. Allison have asked a franchise from the city council to build another trolley line in Memphis.

Meridian, Miss.—Hon. E. H. Dial, mayor, writes the MANUFACTURERS' RECORD that no steps have been taken towards building the proposed electric line. He may be addressed by anyone interested.

New Orleans, La.—The Orleans Railroad Co. has awarded contracts for rolling stock and rails for its electric lines. Loss & Co. are contractors. Construction work is to begin in April.

Parkersburg, W. Va.—W. R. Hurd, of the Parkersburg Traction Co., advises the MANUFACTURERS' RECORD that it will soon be ready to let contracts for rebuilding the Park City line for use of trolley cars. No material has been purchased or contracts let. His address is 320 Eighth street.

Parkersburg, W. Va.—President Gould, of the Park City Railway Co., writes the MANUFACTURERS' RECORD that W. R. Hura and others are negotiating to buy the line, which, it is understood, is to be converted into an electric road.

Portsmouth, Va.—Messrs. John Finney and J. K. Siegfried, of Pottsville, Pa., are reported to be among the parties who have purchased the Portsmouth street railway. It will be changed to an electric line and operated in connection with the Port Norfolk road.

Sistersville, W. Va.—People in the vicinity of Sistersville have agreed to take \$50,000 in bonds to build the West Virginia Short Line road from Clarksburg to Sistersville.

Washington, D. C.—Director Henry M. Earle, of the Georgetown & Tennytown electric road, advises the MANUFACTURERS' RECORD that its new owners will probably secure new rolling stock and improve the power-house. The Rock Creek electric road will also be improved, and work has begun on it. O. T. Crosby is president, and H. T. Purdy, secretary of the Georgetown & Tennytown line.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Blower.—The Brush Electric Light & Power Co., Savannah, Ga., wants a blower to furnish 300 cubic feet of air at seven pounds pressure per minute.

Boiler and Engine.—See "cotton mill."

Boiler and Engine.—Wanted, second-hand five or six horse-power engine and eight horse-power boiler; must be in good condition and cheap. Address Louis 482, Sun Office, Baltimore, Md.

Bolt Cutter.—The Cameron & Barkley Co., Charleston, S. C., is in the market for prices on bolt cutter, cut from three-eighths to one and one-half, new or second-hand, to make bolts complete.

Brick Machine.—Will want brick machine. Address C. A. Savage, Walterboro, S. C.

Brick Machinery.—J. H. Patton, Stephenville, Texas, wants to buy a brick press, second-hand.

Bridge.—Sealed bids will be opened April 1 for building a steel bridge at Montevallo, Ala. Profile of site and general specifications may be seen by application to Jno. A. Milver, engineer, Birmingham. Address R. H. Walker, Montevallo, Ala.

Building Material.—The Winifrede Coal Co., Winifrede, W. Va., will want brick for walls of building 38x77 feet and slate for roof.

Corn and Cob Mill.—A. K. Fisher, Abbeville, Ga., wants a new or second-hand corn, shuck and cob mill for grinding stock feed.

Cotton Mill.—Jno. D. Verner, Walhalla, S. C., will receive proposals for erecting and equipping the Walhalla Cotton Mills (to cost \$85,000). See Textile Notes in MANUFACTURERS' RECORD.

Cotton Mill.—R. T. Vinson, Shreveport, La., wants full information regarding cotton mill, including description of mill that \$52,000 would build.

Cotton Mill.—Orders will be placed at once for mill of 2000 or 4000 spindles, including boiler, engine, etc., at Rutherfordton, N. C. Address W. H. Norris.

Cotton Mill.—The Colleton Cotton Mills Co. will

want complete outfit for mill, including boiler and engine, etc. Address C. A. Savage, Walterboro, S. C.

Dynamo.—The Lockhart Electric Light Co., Lockhart, Texas, wants to buy a 750-light direct-current incandescent dynamo of 115 volts; quote lowest prices.

Electric Lighting.—Bids will be received until April 26 for lighting the city of Greensboro, N. C., with electricity. Address A. M. Scales, city clerk.

Electric-light Plant.—The Jefferson Park Co., Charlottesville, Va., will want electric-light-plant machinery; F. B. Peyton, secretary.

Electric-light Plant.—W. R. Smith, secretary Commercial Club, Livingston, Ala., is ready to correspond with builders of electric-light plants.

Engines.—Casey & Michael, Harrisonville, Ohio, want prices on portable and stationary engines.

Fire Apparatus.—See item under Bamberg, S. C., in Construction Department.

Fire Apparatus.—See Building Note under Frederick, Md.

Gasoline Engine.—J. H. Dagg, Hopkinsville, Ky., wants a twenty-horse-power gasoline engine.

Handle Machinery.—B. H. Merriman, Greensboro, N. C., wants to buy plan-handle machinery.

Heating Plant.—T. T. Boyd, Natchitoches, La., will receive bids to April 10 for heating a building by steam, hot water or hot air.

Iron Doors.—The Pamphio Brick & Tile Co., Washington, N. C., wants to purchase iron doors for brick-kiln.

Knitting Mill.—L. W. T., care MANUFACTURERS' RECORD, wants estimates on cost of small mill for knitting seamless hosiery.

Lumber-mill Machinery.—Casey & Michael, Harrisonville, Ohio, want prices on shingle and heading machinery, saw-mill and planing machinery, etc.

Machine Tools.—Warrior Machine Works, Birmingham, Ala., wants an engine lathe, 20 inch swing and 10-foot bed; a shaper, 26 to 32-inch stroke; 32-inch drill press, 20 inch drill press and planer 36x36 inches by eight feet.

Moss Machinery.—Jno. R. Bradford, Tallahassee, Fla., wants addresses of manufacturers of machinery for preparing moss.

Paper Boxes.—The Seeman Manufacturing Co., Savannah, Ga., wants one half and one pound paper boxes for packing lampblack.

Planing Mill.—J. H. Dagg, Hopkinsville, Ky., wants equipments for planing mill, including 24-inch planer and matcher, band-sawing machine, self-feed rip saw, cut off saw, circular resaw, etc.

Printing and Lithographing Outfit.—The Augusta Lithograph Co., Augusta, Ga., will want power press, hand press, ruling machine with diamond, stones, etc.; second-hand will do. Address in care of W. B. Correll.

Pump.—S. G. Phillips, Rahway, N. J., wants a vacuum pump capable of taking condensation from an engine of 100 horse-power; second hand will do if in A1 condition.

Pump.—Wanted, second hand Erichson hot-air pump; must be cheap and in good order. Address Box 107, Catonsville, Md.

Railway Proposals.—The Sirapuxent Beach Co., Equitable Building, Baltimore, Md., has decided to at once receive bids for the construction of a narrow-gauge steam railway five miles long.

Railway Supplies.—The Warren Land & Lumber Co., Warren, Texas, may want several miles of 35-pound rails and rolling stock.

Resaws.—Rosendo & Torras, Brunswick, Ga., want prices on resaw machines.

Riveter.—Crellin & Nalls, Birmingham, Ala., are in the market for a power riveter of modern make, with about eight-foot reach.

Roofing.—Iron roofing will be wanted. Address C. A. Savage, Walterboro, S. C.

Roofing.—The Colorado City Wool Scouring & Manufacturing Co., Colorado City, Texas, will need roofing.

Sewer.—Proposals will be opened April 1 for constructing sewer, to consist of about 6775 feet of 10 to 24 inch pipe, 240 cubic yards rubble masonry, twenty-five cubic yards concrete, 400 cubic yards embankment, etc. Address E. F. C. Harding, engineer, Jefferson, Mo.

Spring and Tool Steel.—The Marietta Chair Co., Marietta, Ga., wants to buy spring steel in strips, cut to sizes, and tool steel for making lathe bits.

Structural Iron.—L. G. Young, Union, S. C., wants to correspond with manufacturers of structural iron, who also furnish superintendents of construction.

Telephone Equipment.—The Monroe Telephone Co., Limited, Monroe, La., wants wires, telephones, insulators, 1200 feet of cable for river, etc., for system of 200 instruments; W. B. Reilly, president.

Tin and Composition Foil.—Wanted, prices and samples of tin and composition foil by hundred-weight. Address H. C. C., care MANUFACTURERS' RECORD.

Veneering Machinery.—Geo. Whitfield, Abbe-

ville, Ga., wants to correspond with manufacturers of veneering machinery.

Water Works.—Complete outfit for water works will be wanted. Address Geo. S. Crouch, Morristown, Tenn.

Water Works.—Plans and details for water works and estimates on material are wanted by the Corsicana Water Development Co., Corsicana, Texas. See item in Construction Department.

Wire-novelty Machinery.—The Atlanta Inventors' Development & Manufacturing Co., Atlanta, Ga., wants to correspond with manufacturers of wire-novelty machines. Address S. T. Neil, president.

Woodenware Machinery.—Geo. Whitfield, Abbeville, Ga., wants to correspond with manufacturers of machinery for making butter dishes, tubs, buckets, etc.

The Atlanta Inventors' Development & Manufacturing Co., Atlanta, Ga., wants to correspond with novelty-printing companies. Address S. T. Neil, president.

TRADE NOTES.

WM. F. WEIRICK, of Charleston, W. Va., has contracted with Aug. Wolf & Co., of Chambersburg, Pa., for a full roller-process 50-barrel flour mill.

THE M. A. Furbush & Son Machine Co., of Philadelphia, Pa., manufacturer of woolen machinery and the celebrated Munkland ingrain carpet loom, reports a large increase in orders for export to Mexico and South America.

THE Pettet Machine Works, of Newton Upper Falls, Mass., is full of orders for its improved revolving flat cards, railway heads and drawing frames, and at the same time has men setting up machinery at the following mills: Seacoast Mills, Fall River, Mass.; Newberry Cotton Mills, Newberry, S. C.; Pacolet Manufacturing Co., Pacolet, S. C.; Durfee Mills, Fall River, Mass.; Edwin Bartlett's mill, North Oxford, Mass.; Pepperell Manufacturing Co., Biddeford, Me.; Modena Cotton Mills, Gastonia, N. C.

DURING the present month the Rice & Sargent Engine Co., of Providence, R. I., has received three orders for steam engines. One is a tandem-compound of 300 horse-power, with cylinders fourteen and twenty-six inches and a 42-inch stroke, independent condenser, to run at 100 revolutions a minute in the Pembroke Mills, Suncook, N. H. The Lawrence (Mass.) Lumber Co. has ordered a 200 horse-power engine, 20x42, eighty revolutions, and the Oakdale Manufacturing Co., of Providence, R. I., a 75 horse-power engine, 12x30, 110 revolutions.

THE Lukens Iron & Steel Co., Coatesville, Pa., which makes a specialty of the Huston patent boiler brace, recently received an order for 6000 tons of open-hearth steel plates to be used in the construction of the cantilever bridge across the East river at Blackwell's Island, New York city. This company has also received large orders for boiler steel from Cramp & Sons, the Philadelphia shipbuilders, for the new Clyde Line steamship, and from the Pennsylvania Railroad Co., the Lehigh Valley Railroad Co., the Schenectady Locomotive Works and others for boiler and fire-box steel.

A PRACTICAL lumberman's experience with tramway locomotives is well calculated to show the requirements essential to a first-class and economical engine of this type. Consolidating such an experience with the latest improved mechanical ideas, and the result is a tramway locomotive that meets the demands of the service. Judging from its popularity, the "Climax" seems to embrace in its plan and construction such a combination. It was invented and brought out by a lumberman of large experience in hauling logs by steam from the forest to the mill. The success attained is evidenced by the popularity of this style of locomotive. Repeated orders from those employing the "Climax" show what satisfaction it is giving. Just now the Climax Manufacturing Co., of Corry, Pa., the builder, is constructing another 25-ton locomotive for the Trexler & Torrell Lumber Co., Ricketts, Pa. The equipment of the "Climax" peculiarly adapts it to rough and uneven roads, short curves and steep grades.

THE Goulds Manufacturing Co. has just begun the erection of a new addition to its extensive works at Seneca Falls, N. Y. The construction of this building is necessitated by the steadily-increasing business of this concern in triplex power pumps. The building will be a modern structure of the slow-burning type. Its length is eighty-six feet and width thirty-five feet. The framework, beams, columns and roof truss will be of steel. The building will be two stories in height, with basement for storage of castings. The main room for heavy machines and erecting purposes will be twenty-two feet high and served by an electric bridge crane of ten tons capacity. The gallery will divide one side into two stories for lighter machine tools. The walls will be of brick, while the skylight and upper windows will be glazed with ribbed glass. The entire main floor is de-

signed to stand a uniform strain of 400 pounds to the square foot, although a limited area is capable of bearing 600 pounds to the square foot. It is expected that the building will be completed about June 1.

ONE of the largest jobs of ornamental galvanized-iron work ever let at Pittsburgh, Pa., is just being finished by S. Keighley & Co., of that city. The work in question consists of covering the entire exterior of a large casino building being erected by a syndicate for amusement purposes. The building is 300 feet long at the cornice line and 109 feet wide. The treatment of the exterior is such as to permit of making a very handsome piece of work. It is divided up into panels by pilasters, having ornamented faces and capitals. The arched windows are surmounted by paneled checkered work, finishing in the centre with keystones. The frieze of the main cornice is divided into panels by handsome pressed consoles which finish into the dental mold of the main cornice. This cornice is a special feature in itself, having five feet projection, with a highly ornamental garland frieze divided by large brackets. The building is intended in the winter-time to be utilized for indoor skating, and is being finished in every respect regardless of cost. A large demand is being shown for the architectural sheet-metal work made by S. Keighley & Co., not only in the line of ornamental galvanized-iron work, but also on the specialty they manufacture in metal ceilings. This contract is only one of a number being executed by this firm, who see ahead an exceedingly bright outlook for business.

TRADE LITERATURE.

A CATALOGUE describing the Lane high-grade automatic vertical and horizontal engines has just been issued. The chief points emphasized in these engines are perfect regulation, rigid frame, large wearing surfaces, durability and economy of steam. Several engines of new pattern are shown that have been recently placed on the market. A description of the Lane boilers is also given. The Lane Foundry and Machine Works, Huntingdon, Pa., manufactures these boilers and engines.

THOSE interested in building, either as architects or contractors, as well as dealers in building supplies, will find a little book just issued by the National Building Supply Co., of Baltimore, to be a useful compendium. This concern, with its extensive facilities and the high reputation of its various products, embracing practically everything specified in modern building construction, is an important factor in the building supply trade of the country. The book it has published describes in detail its different products.

AN exhaustive catalogue of pumps has been issued by the Goulds Manufacturing Co., of Seneca Falls, N. Y. It embraces carefully-prepared descriptions of pumps and hydraulic machinery for every service. Much advancement in pump construction is shown in many of the styles, and the well-known efficiency of the Goulds pump is maintained at its standard. A complete index and some useful notes on pump and hydraulic machinery are features. The catalogue is substantially bound, and embraces over 300 pages. The collection of data and the many illustrations make it a handy reference book.

Two little pamphlets that are just bubbling over with breezy and bright paragraphs are sent out by the Central Coal & Coke Co., of Kansas City, Mo. They tell of the qualities of Little river soft pine manufactured by this company, whose mills are at Texarkana, Texas, and Ashdown, Ark. Tables are given of measurements and prices of flooring, ceiling, partition, siding, finishing, molded casings and base, common boards, common ship-lap, fencing, factory flooring and car-decking, dimension, rough timbers, battens, etc. Other information of value to lumber dealers is also given.

An Attractive Southern Property.

The advertiser has for sale one of the most attractive properties in the South. It comprises 1300 acres, 450 being in cultivation and 700 in virgin pine forest. It has exceptionally good railroad facilities. The land will produce large crops of corn, cotton, tobacco and all ordinary crops, and is particularly well-suited to trucking and fruit-growing. In the centre of the property there is a beautiful clear lake covering 150 acres, which abounds in fish and is a favorite haunt of ducks and other water-fowl. It is admirably adapted to boating, bathing, etc. The land surrounding the lake is entirely free from swamp and marsh, and affords beautiful sites for residences. The forest and fields abound in all kinds of game. As a hunting preserve this place cannot be surpassed. It could be made one of the most delightful homes in the South. For a fine resort hotel no better place can be found in America. The locality is pre-eminently healthy. Price \$10,000. For particulars address B. S. C., care MANUFACTURERS' RECORD. †

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SOME facts of interest to steam users are presented in a pamphlet issued by the Hayden & Derby Manufacturing Co., 111 Liberty street, New York city. It is called "Practical Information About Injectors." Definite information is given, showing the range of the injector under the various conditions found in practice. The essentials of a good injector and the two distinct types of such devices are described.

The Norwich Line is one of the popular steamship lines between Boston and New York. Solid vestibuled trains leave the New York & New England depot, foot of Summer street, Boston, daily, Sundays excepted, at 7:05 P. M., making close connections with steamers at New London. On the return from New York, steamers leave Pier 40, North river, at 5:30 P. M., and the connecting train is due in Boston at 9 A. M. †

FOR "CLASSIFIED INDEX" SEE PAGES 3, 5 AND 7

• Not in this issue.

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PROPOSALS.

NOTICE TO CONTRACTORS.

Sealed proposals will be received until 12 o'clock M. 22d April, 1895, by the Board of Supervisors of Mecklenburg county, in the State of Virginia for putting in Double Doors to the Front and Rear of County Jail of Steel Plate 1/2-inch thick, with suitable Iron Framing for same of five-ply iron and steel, the outer doors to be fastened with Yale Rim Locks, and inner doors with Yale Pad Locks. Front door is 9 feet high, and is 3 feet, 11 inches wide. Rear door is 7 feet, 6 inches high, with no transom, and is 3 feet, 11 inches wide. These measurements of height are taken from the center of the arch over each door. And also proposals will be received at the same time for the putting in of Iron Grating to Four Windows of Five Ply Iron and Steel. The windows are 5 feet, 1 inch high, and 3 feet, 9 inches wide. The windows to have suitable Iron Framing of same material to fasten the grating to; the horizontal bars to the grating to be 2 1/2 x 3/4 inches, placed 12 inches apart and the vertical rods to be 3/4 inches, placed 4 inches apart. The contractor will be required to give bond with good security in double the penalty of his bid. The Board of Supervisors reserves the right to accept or reject any and all bids. Address all communications to W. A. JAMIESON, Clerk Board of Supervisors, Bedford, Mecklenburg county, Virginia.

W. A. PACE,
C. S. HUTCHESON,
W. H. C. WALKER.

TREASURY DEPARTMENT, Office Super-
vising Architect, Washington, D. C., March 25, 1895. Sealed proposals will be received at this office until 2 o'clock P. M. on the 23d day of April, 1895, and opened immediately thereafter, for all the labor and materials required for the erection and completion of a Marine Hospital building at Gulf Quarantine Station, Ship Island, Miss., in accordance with the drawings and specification, copies of which may be obtained at this office or at the office of the Custodian at the station. Each bid must be accompanied by a certified check for a sum not less than 2 per cent. of the amount of the proposal. The right is reserved to reject any and all bids and to waive any defect or informality in any bid should it be deemed in the interest of the government to do so. All bids received after the time stated will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked "Proposal for a U. S. Marine Hospital Building, Gulf Quarantine Station, Ship Island, Miss.," and addressed to CHARLES E. KEMPER, Acting Supervising Architect.

TREASURY DEPARTMENT, Office Super-
vising Architect, Washington, D. C., March 22d, 1895. Sealed proposals will be received at this office until 2 o'clock P. M. on the 13th day of April, 1895, and opened immediately thereafter, for furnishing and putting in place complete the second story columns and the third floor beams and girders, etc., in the U. S. Postoffice, Court-house and Custom-house at St. Paul, Minnesota, in strict accordance with the drawings and specification, copies of which may be obtained at this office or the office of the Superintendent at St. Paul, Minnesota. Each bid must be accompanied by a certified check for a sum not less than 2 per cent. of the amount of the proposal. The right is reserved to reject any or all bids or to waive any defect or informality in any bid should it be deemed in the interest of the Government to do so. All bids received after the time stated will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked, "Proposal for the Second Story Columns and Third Floor Beams and Girders, etc., for the U. S. Postoffice, Courthouse and Custom-house at St. Paul, Minnesota," and addressed to C. E. KEMPER, Acting Supervising Architect.

TREASURY DEPARTMENT, Office Super-
vising Architect, Washington, D. C., March 20, 1895. Sealed proposals will be received at this office until 2 o'clock P. M. on the 19th day of April, 1895, and opened immediately thereafter, for all the labor and materials and fixing in place complete the low pressure, return-circulation steam-heating and ventilating apparatus required for the U. S. Postoffice building at Lima, Ohio, in accordance with the drawings and specification, copies of which may be had at this office or the office of the Superintendent at Lima, Ohio. Each bid must be accompanied by a certified check for a sum not less than 2 per cent. of the amount of the proposal. The right is reserved to reject any or all bids and to waive any defect or informality in any bid should it be deemed in the interest of the Government to do so. All proposals received after the time stated for opening will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked, "Proposal for the Heating and Ventilating Apparatus, etc., for the U. S. Postoffice Building at Lima, Ohio," and addressed to CHARLES E. KEMPER, Acting Supervising Architect.

TREASURY DEPARTMENT, Office Super-
vising Architect, Washington, D. C., March 16, 1895. Sealed proposals will be received at this office until 2 o'clock P. M. on the 12th day of April, 1895, and opened immediately thereafter, for all the labor and materials required for the erection and completion (except heating apparatus) of the United States Postoffice building at Salina, Kansas, in accordance with the drawings and specification, copies of which may be had at this office or the office of the Superintendent at Salina, Kansas. Each bid must be accompanied by a certified check for a sum not less than 2 per cent. of the amount of the proposal. The right is reserved to reject any and all bids and to waive any defect or informality in any bid should it be deemed in the interest of the Government to do so. All proposals received after the time stated for opening will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked, "Proposal for the

Erection and Completion (except heating apparatus) of the U. S. Postoffice building at Salina, Kansas," and addressed to CHARLES E. KEMPER, Acting Supervising Architect.

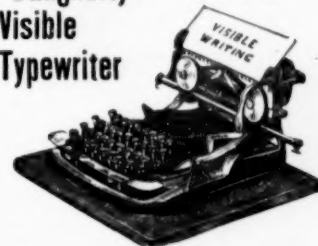
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